1-1-1900

Indiana Farmers' Behavior and Preferences in Purchasing Fertilizer

Thomas F. Funk

W. David Downey

Fertilizer Marketing Report

EC 532

Fertilizer Marketing Report

Report No. 3

June 1981

INDIANA FARMERS' BEHAVIOR AND PREFERENCES IN PURCHASING FERTILIZER

THOMAS F. FUNK
SCHOOL OF AGRICULTURAL ECONOMICS
AND EXTENSION EDUCATION
UNIVERSITY OF GUELPH
GUELPH, ONTARIO
CANADA

W. DAVID DOWNEY
AGRICULTURAL ECONOMICS DEPARTMENT
PURDUE UNIVERSITY
WEST LAFAYETTE, INDIANA
U.S.A.

INDIANA FARMERS' BEHAVIOR AND PREFERENCES IN PURCHASING FERTILIZER

By

Thomas F. Funk
School of Agricultural Economics
and Extension Education
University of Guelph
Guelph, Ontario
Canada

W. David Downey
Agricultural Economics Department
Purdue University
West Lafayette, Indiana
U.S.A.

FOREWORD

This report is the third in a series of three reports which focuses on the fertilizer product/service needs, buying behavior, attitudes, and preferences of farmers and the manner in which this information can be used in developing product, price, promotion, and distribution policies for manufacturers and dealers. Attention is also given to identifying and evaluating segments in the fertilizer market and variations in the market programs for those segments.

The titles of all the reports in this current series are:

1) IMPORTANCE PERFORMANCE ANALYSIS FOR FERTILIZER DEALERS

2) USE OF FERTILIZER PRODUCTS AND SERVICES BY INDIANA FARMERS

3) INDIANA FARMERS' BEHAVIOR AND PREFERENCES IN PURCHASING FERTILIZER

This report was made possible with the cooperation and assistance of many people and organizations. To all we are most grateful.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF TABLES (Continued)

1.0 INTRODUCTION

Recent agricultural statistics estimate that Indiana farmers spend in excess of $300 million annually on fertilizers for various crops. In terms of total farm operating expenses, the expenditure on fertilizer is exceeded only by wages, machinery, and purchased feeds. Thus, the fertilizer purchase represents a major cost component for most Indiana farmers, and, as a result, has supported the development of an important industry to supply fertilizer products and services to farmers.

The objective of the research reported in this paper, and others in the series, is to develop information to assist fertilizer manufacturers and dealers in developing effective marketing programs to serve the farm market. The study, therefore, focuses on the fertilizer product/service needs, buying behavior, attitudes, and preferences of farmers, and the manner in which this information can be used to develop product, price, promotion, and distribution policies for manufacturers and dealers. In addition, attention is given to identifying and evaluating segments in the fertilizer market, and variations in marketing programs for each segment.

1.1 Objectives and Scope

The objective of this report is to discuss the results of the study as they pertain to the behavior and preferences of different target groups of farmers in purchasing and using fertilizer products and services. This involves a consideration of the following major topics: (1) shopping behavior, (2) use and evaluation of information sources, (3) fertilizer pricing, (4) dealer patronage, (5) product line, (6) dealer services, and (7) basic farmer attitudes.

1.2 Research Design

The methodology used in this research is described in detail in the first report in this series. This section summarizes the important features of the research design.

The data for this study was obtained through a survey of Central Indiana farmers. The field work was conducted in the summer of 1979 using a structured questionnaire administered by undergraduate agricultural students from Purdue University.

The sample consisted of 150 farmers from two Indiana counties in Central Indiana. These counties were selected to represent the major types of agriculture in Indiana. Within each county the population of interest was defined as all farmers who purchased some fertilizer and grew at least 100 acres of crops in 1979. These farmers were then stratified into acreage groups and names randomly selected for interviews. The acreage categories, and the percentage for farmers in each category are: 100 to 400 acres, 40 percent; 401 to 700 acres, 36 percent; and over 700 acres, 25 percent.

1.3 Segmentation Analysis

One of the principal objectives of this research is to see how fertilizer purchasing behavor and preferences vary from one target group of farmers to another. The segments used in the analysis were formed on the basis of size (acres and gross income), farm type, age of the farmer, and location (county). Table 1.1 shows the categories, and the percentages of farmers in each category, for the six segmentation variables.

TABLE 1.1

SAMPLE PROFILE, INDIANA, 1979

Characteristics	Percent of Farmers	Characteristics	Percent of Farmers
Size of Purchase[1]		Farm Type[2]	
Under 50 tons	21	Cash Crop	30
51-100 tons	28	Livestock	17
101-200 tons	22	Mixed	53
Over 200 tons	27		
Total Acres		Age	
100-400 acres	41	Under 35	23
400-700 acres	34	35 - 44	24
Over 700 acres	24	45 - 54	25
		Over 55	27
Gross Income		County	
Less than $50,000	17	Jasper	50
$50,000-$100,000	33	(North Central)	
$100,000-$200,000	26	Decatur	50
Over $200,000	24	(Southeast)	

1 All purchase quantities are reported in short tons.

2 Farmers were placed into farm type categories based on the percentage of gross income derived from different enterprises. Cash crop farmers were those who reported 100 percent of their gross income from the sale of various crops; livestock farmers were those who reported 75 to 100 percent of their gross income from the sale of livestock; mixed farmers were those who reported some income from the sale of crops and some from the sale of livestock, but less than 75 percent from the sale of livestock.

2.0 SURVEY RESULTS

This section presents the survey results related to the behavior and preferences of farmers in purchasing fertilizer products and services. Included is a discussion of (1) shopping activities, (2) information sources, (3) fertilizer pricing, (4) dealer patronage, (5) product line, (6) fertilizer services, and (7) farmer attitudes. In addition to presenting the results for all farmers, this section discusses differences in the above areas related to (1) size of purchase, (2) total acres, (3) gross income, (4) farm type, (5) age, and (6) county. These breakdowns provide useful information for designing marketing programs aimed at specific segments of the Indiana fertilizer market.

2.1 Shopping Activities

The first area of fertilizer purchasing behavior explored was the use of shopping activities by Indiana farmers. In considering this area, the potential shopping activities were divided into four groups: those related to (1) discussing the fertilizer program with various influence groups (2) attending fertilizer related events, (3) reading fertilizer related publications, and (4) contacting fertilizer dealers. Results as they apply to each of these types of activities are discussed below.

2.1.1 Discussions With Influence Groups

In the course of a year, farmers discuss their fertilizer program with a number of parties in order to obtain information and advice on various aspects of fertilizer use and dealer selection. Figure 2.1 lists the influence groups considered in this research and the extent to which they were consulted by farmers in 1979 for information and advice regarding fertilizer. The results in this figure clearly show

FIGURE 2.1 EXTENT TO WHICH FARMERS DISCUSS THEIR FERTILIZER PROGRAM, INDIANA 1979

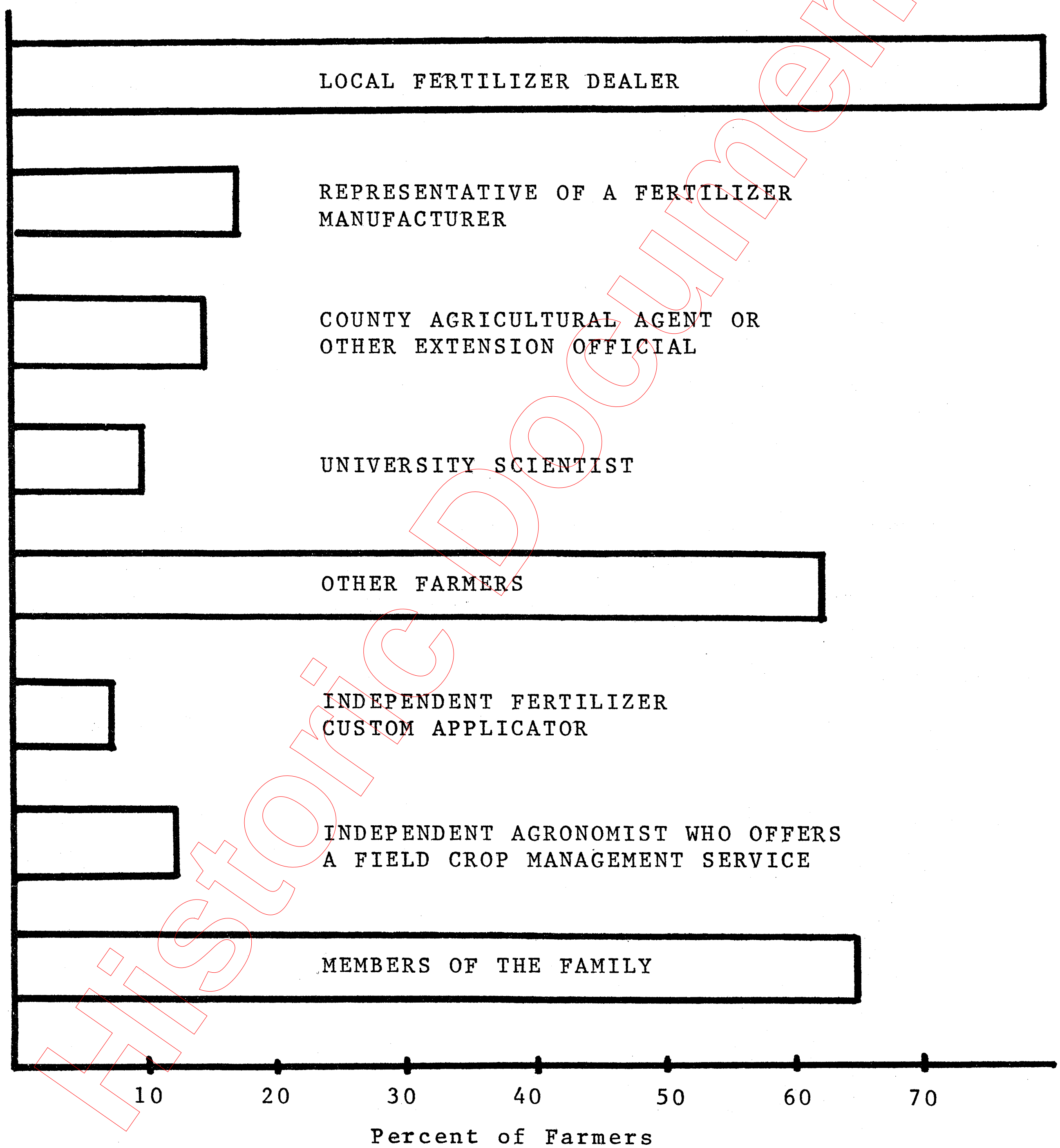


TABLE 2.1

FARMER DIFFERENCES IN FERTILIZER DISCUSSIONS
INDIANA, 1979

CHARACTERISTICS / VARIABLES	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
LOCAL FERTILIZER DEALER	80%					* 35-44 54-54	
REPRESENTATIVE OF A FERTILIZER MANUFACTURER	18%						
COUNTY AGRICULTURAL AGENT OR OTHER EXTENSION OFFICERS	15%	* 51-100					
UNIVERSITY SCIENTISTS	10%	* Over 200	* Over 700	* Over 200			

TABLE 2.1
FARMER DIFFERENCES IN FERTILIZER DISCUSSIONS
INDIANA, 1979 (Continued)

CHARACTERISTICS / VARIABLES	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
OTHER FARMERS	62%						** Jasper
INDEPENDENT FERTILIZER CUSTOM APPLICATORS	8%			* Under 50		** 45-54	
INDEPENDENT AGRONOMISTS WHO OFFER A FIELD CROP MANAGEMENT SERVICE	12%	** Over 200	** Over 700	** 100-200 Over 200		* Under 35 35-44 45-54	** Jasper
MEMBERS OF THE FAMILY	65%						* Jasper

that the local fertilizer dealer, other farmers, and members of the family are by far the most widely used influence groups. In each case, over 60 percent of the farmers responded that they discussed their fertilizer program at least once with these parties. Of considerably less importance were representatives of fertilizer manufacturers, agricultural representatives and/or other extension personnel, university scientists, and independent agronomists. Between ten and twenty percent of the farmers reported discussions with these groups in 1979. Finally, of very little overall importance were independent fertilizer custom applicators. Only a few farmers reported discussions with these people in 1979.

Table 2.1 shows the types of farmers likely to seek information and advice from the influence groups listed in Figure 2.1. The important results in this table are: (1) all farmers except those in the older and younger age categories tend to discuss their fertilizer programs with local dealers, (2) farmers who purchase medium quantities of fertilizer are the most likely to have contact with fertilizer company representatives, (3) large purchase, high gross income farmers are the most likely to visit university scientists to discuss fertilizer programs, and (4) younger, large farmers tend to discuss fertilizer programs more with independent agronomists than other types of farmers.

2.1.2 Attending Events and Reading Publications

In addition to seeking information and advice from other parties, farmers also can attend fertilizer related events and read fertilizer related publications. The results in Figure 2.2 show that attending farmer meetings, attending company or dealer demonstrations, and visiting fertilizer company or dealer displays at farm shows and fairs are popular activities for many farmers. Attending demonstrations

FIGURE 2.2 EXTENT TO WHICH FARMERS ATTEND FERTILIZER RELATED EVENTS, READ PUBLICATIONS, AND CONTACT DEALERS, INDIANA, 1979

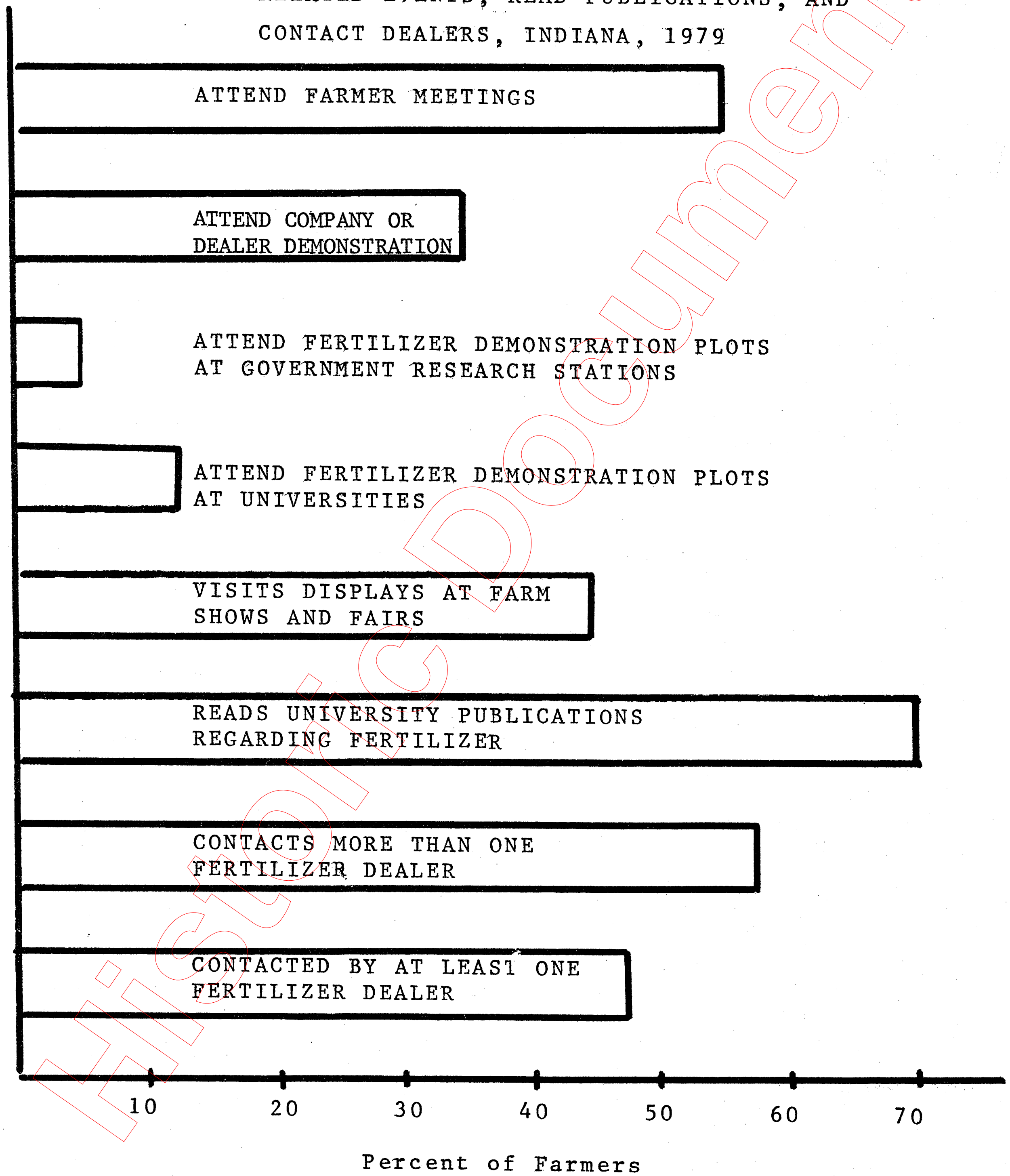


TABLE 2.2

FARMER DIFFERENCES IN ATTENDING FERTILIZER RELATED EVENTS, READING PUBLICATIONS, AND CONTACTING DEALERS, INDIANA 1979

CHARACTERISTICS / VARIABLES	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
ATTEND FARMER MEETINGS	54%	** 51-100 101-200 Over 200					
ATTEND COMPANY OR DEALER DEMONSTRATION	35%	* 51-100 101-200 Over 200			** Cash Crop		
ATTEND FERTILIZER DEMONSTRATION PLOTS AT GOVERNMENT RESEARCH STATIONS	5%	* Over 200					
ATTEND FERTILIZER DEMONSTRATION PLOTS AT UNIVERSITIES	12%	* Over 200					** Jasper

TABLE 2.2

FARMER DIFFERENCES IN ATTENDING FERTILIZER RELATED EVENTS, READING PUBLICATIONS, AND CONTACTING DEALERS, INDIANA 1979 (CONTINUED)

CHARACTERISTICS / VARIABLES	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
VISITS DISPLAYS AT FARM SHOWS AND FAIRS	45%	* Under 50	* Under 50		** Livestock	** 45-54 55 & Over	
READS UNIVERSITY PUBLICATIONS ON FERTILIZERS	70%					** Under 35	
NUMBER OF DEALERS FARMER CONTACTED PRIOR TO PURCHASE	1.9 Dealers	** 101-200 Over 200	** 401-700 Over 700	** 101-200 Over 200		*** Under 35 35-44 Over 55	
NUMBER OF DEALERS CONTACTING FARMER PRIOR TO PURCHASE	1.2 Dealers		* 401-700 Over 700	* 101-200 Over 200			

or demonstration plots sponsored by government research stations and universities are much less popular activities. with regard to reading publications, the results show that 70 percent of the sample farmers read university publications prior to making their fertilizer use decision in 1979.

Table 2.2 shows important differences among farmers in the extent to which they attend meetings or demonstrations and read publications. The important results in this table are: (1) medium and larger purchase farmers have a greater tendency to attend farmer meetings than other farmers; (2) cash crop farmers who purchase medium and large quantities of fertilizer are most likely to attend fertilizer company or dealer demonstrations; (3) very large purchase farmers are the most likely to attend demonstrations or demonstration plots at government research stations and/or universities; (4) small purchase, livestock framers in the older age categories are the most likely to visit fertilizer displays at farm shows and fairs; (5) very young farmers tend to read university fertilizer publications more than other farmers.

2.1.3 Dealer Contacts

The final shopping activity considered is contacting fertilizer dealers prior to purchase. The distribution in Figure 2.3 shows that over 90 percent of the farmers contacted one or more dealers prior to placing a fertilizer order in 1979. Of those farmers who did contact dealers in 1979, over 35 percent contacted only one dealer while fifty percent contacted two or three dealers and five percent contacted four or more dealers.

The number of dealers contacted varied considerably by farm and farmer characteristics as shown in Figure 2.5. The results here reveal that farmers who purchase larger quantities of fertilizer, operate larger farming units, and fall

FIGURE 2.3 NUMBER OF DEALERS FARMERS CONTACTED PRIOR TO PURCHASE INDIANA 1979

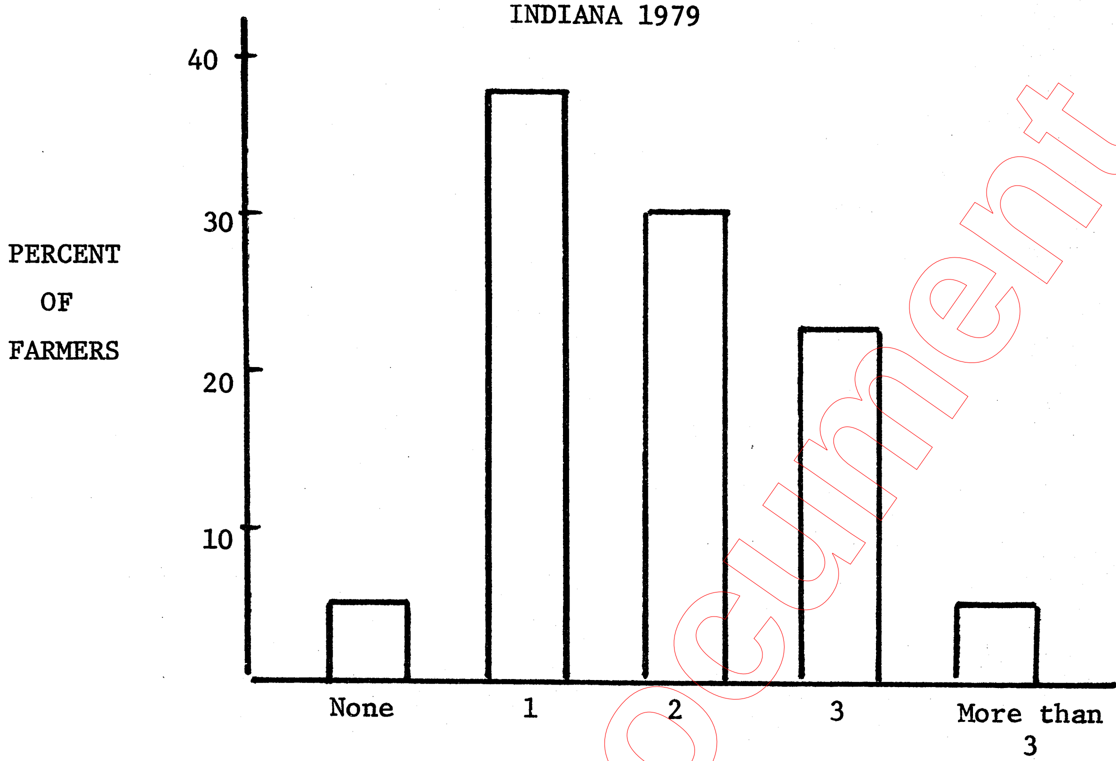


FIGURE 2.4 NUMBER OF DEALERS CONTACTING FARMERS PRIOR TO PURCHASE INDIANA, 1979

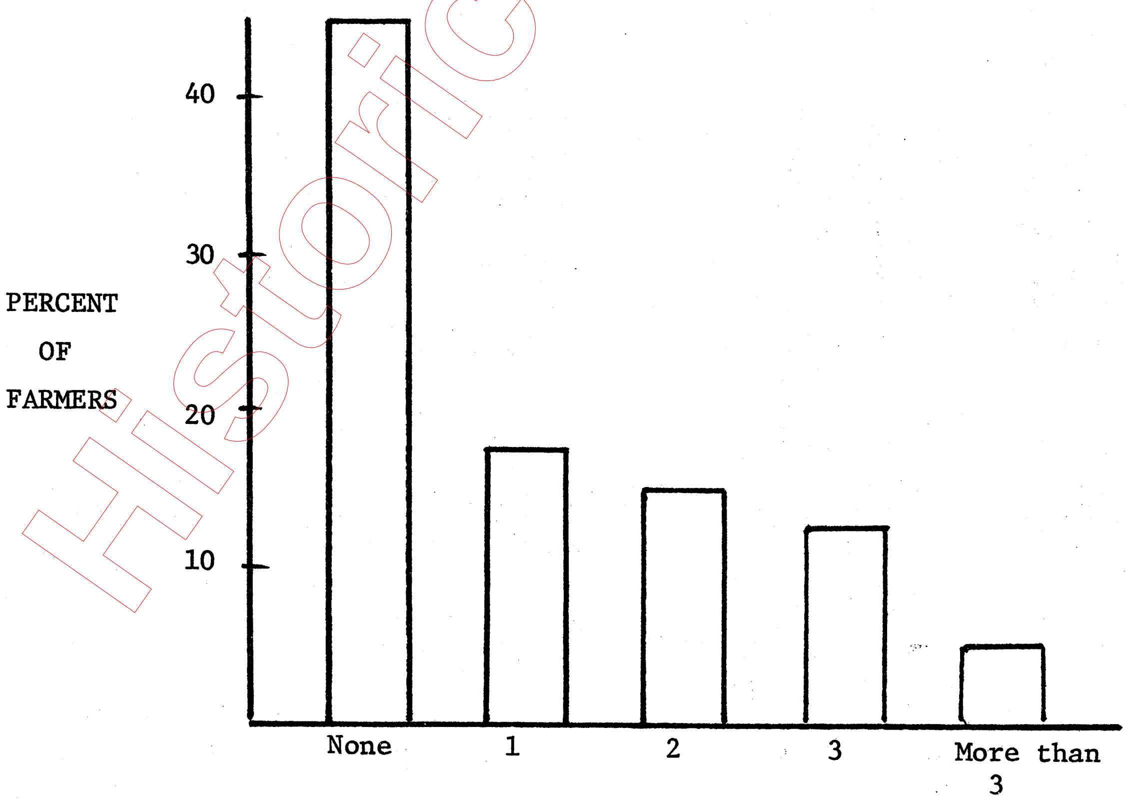


FIGURE 2.5 NUMBER OF DEALERS FARMERS CONTACTED PRIOR TO PURCHASE INDIANA, 1979

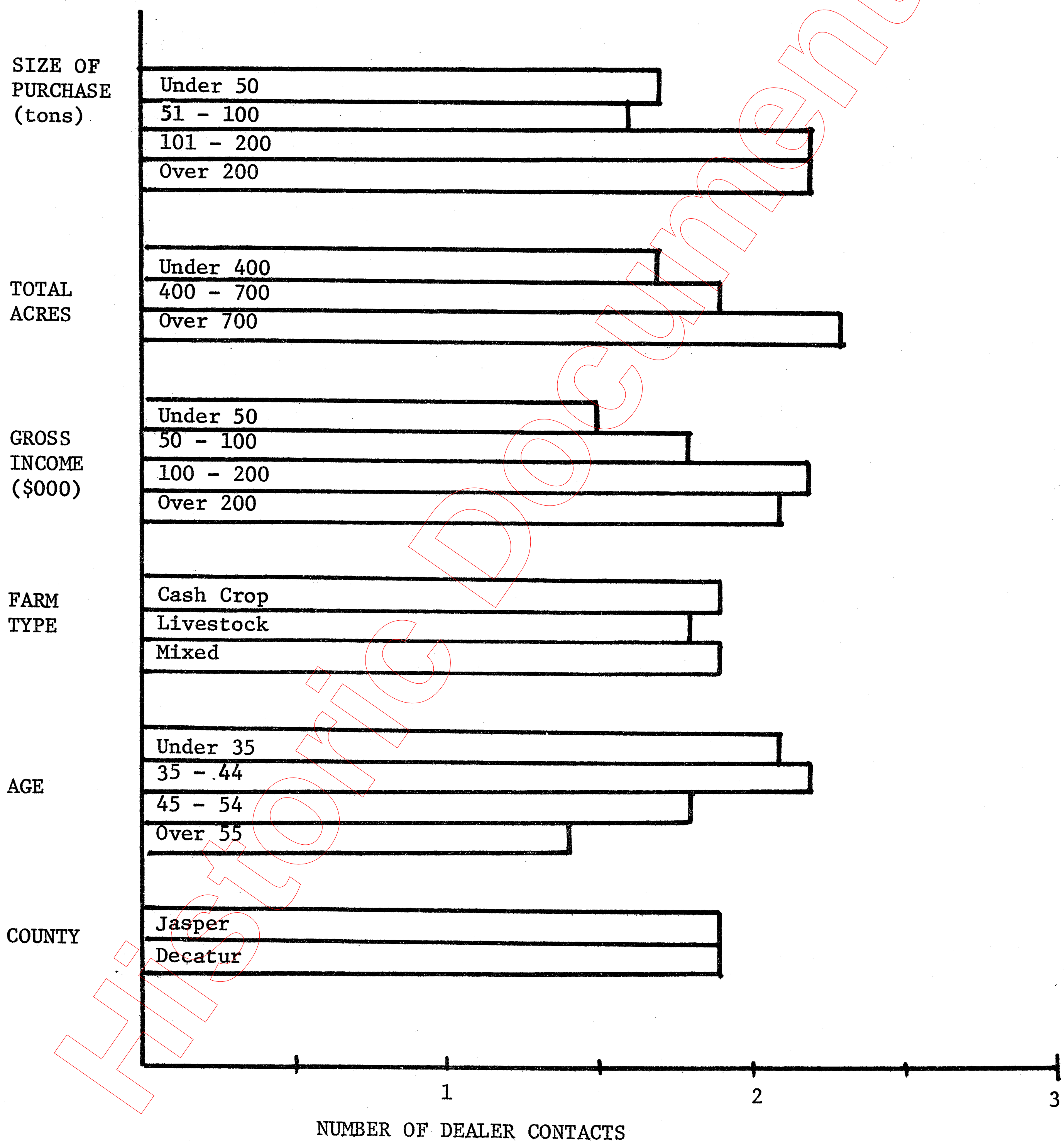
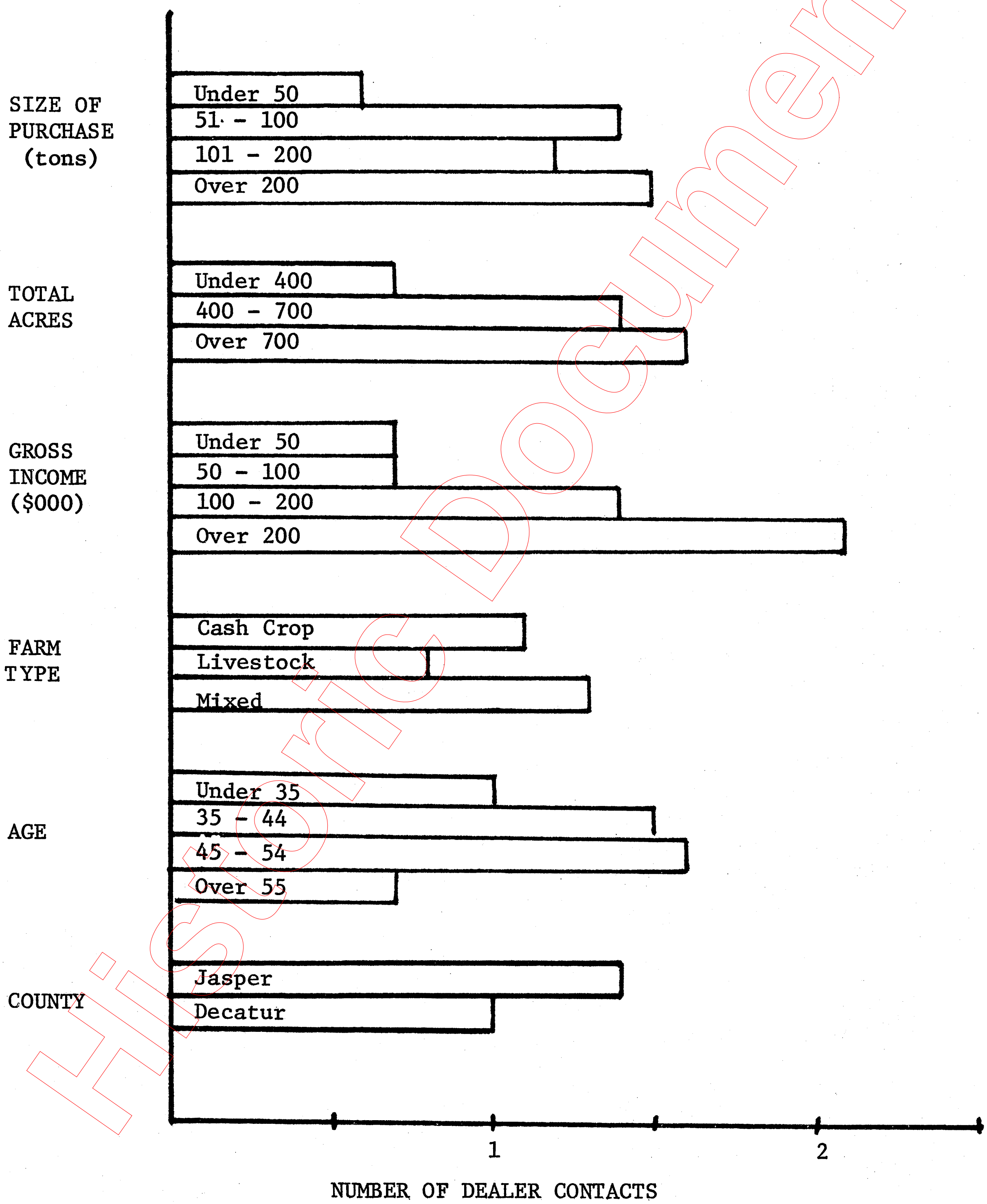


FIGURE 2.6 NUMBER OF DEALERS CONTACTING FARMERS PRIOR TO PURCHASE
INDIANA, 1979



into the younger age categories contact significantly more dealers than other types of farmers.

The information in Figure 2.4 supports the fact that most dealer contacts are initiated by farmers and not fertilizer dealers. This information shows that over 40 percent of the farmers were not contacted by any dealer in 1979, while 30 percent were contacted by one or two dealers, and approximately 20 percent by three or more dealers. As in the case of farmers contacting dealers, the data in Figure 2.6 reveals even a more pronounced tendency for larger farmers to receive dealer calls.

2.2 Information Sources

The previous section presented results showing the extent to which farmers obtain advice and information from various sources. This section discussion farmer evaluation of the importance of these sources in providing information regarding fertilizer application, the proper type of fertilizer for specific areas and soil types, technical problems in using fertilizers, and dealer selection. The two broad types of information sources considered are commercial and non-commercial sources.

Table 2.3 lists the commercial and non-commercial sources used and the percentages of farmers rating each source as "most important" and "important" for the four types of information. For ease of interpretation, the most frequently cited sources for each type of information are shown graphically in Figure 2.7

The most striking feature of Figure 2.7 is the importance attached to the fertilizer dealer in providing all types of information to farmers. In all four areas, the fertilizer dealer ranks as one of the most important information sources, and in the case of providing information

TABLE 2.3

FARMER EVALUATION OF INFORMATION SOURCES, INDIANA, 1979

Information Source	Percentage of Farmers Citing Use of Source for Obtaining Information on							
	Fertilizer Application		Proper Fertilizer		Technical Problems		Selecting Dealer	
	Most Important	Total Mention	Most Important	Total Mention	Most Important	Total Mention	Most Important	Total Mention
Commercial Sources								
Fertilizer Company Representatives	4	14	4	11	12	27	3	4
Fertilizer Dealer	40	66	43	69	63	79	25	34
Farmer Meetings	2	12	1	6	--	--	3	9
Farm Magazine Ads	--	12	--	3	--	--	--	4
Company Information	1	5	--	2	1	2	1	4
Demonstrations	3	7	--	4	1	1	1	3
Farm Shows	--	6	--	1	1	1	--	--
	50		48		78		33	
Non-Commercial Sources								
Other Farmers	8	27	4	17	1	3	60	70
Extension Agents	2	16	6	16	10	26	5	13
Farm Magazine Articles	6	39	--	10	--	1	2	2
Government/University Research Stations	5	13	1	5	5	9	--	2
Government/University Publications	3	25	2	13	1	4	--	1
Soil Tests	23	43	31	50	1	6	1	2
Independent Agronomists	3	5	6	6	4	4	--	1
Custom Applicators	1	5	--	--	--	1	1	1
	50		52		22		67	

FIGURE 2.7

FARMER EVALUATION OF INFORMATION SOURCES, INDIANA, 1979

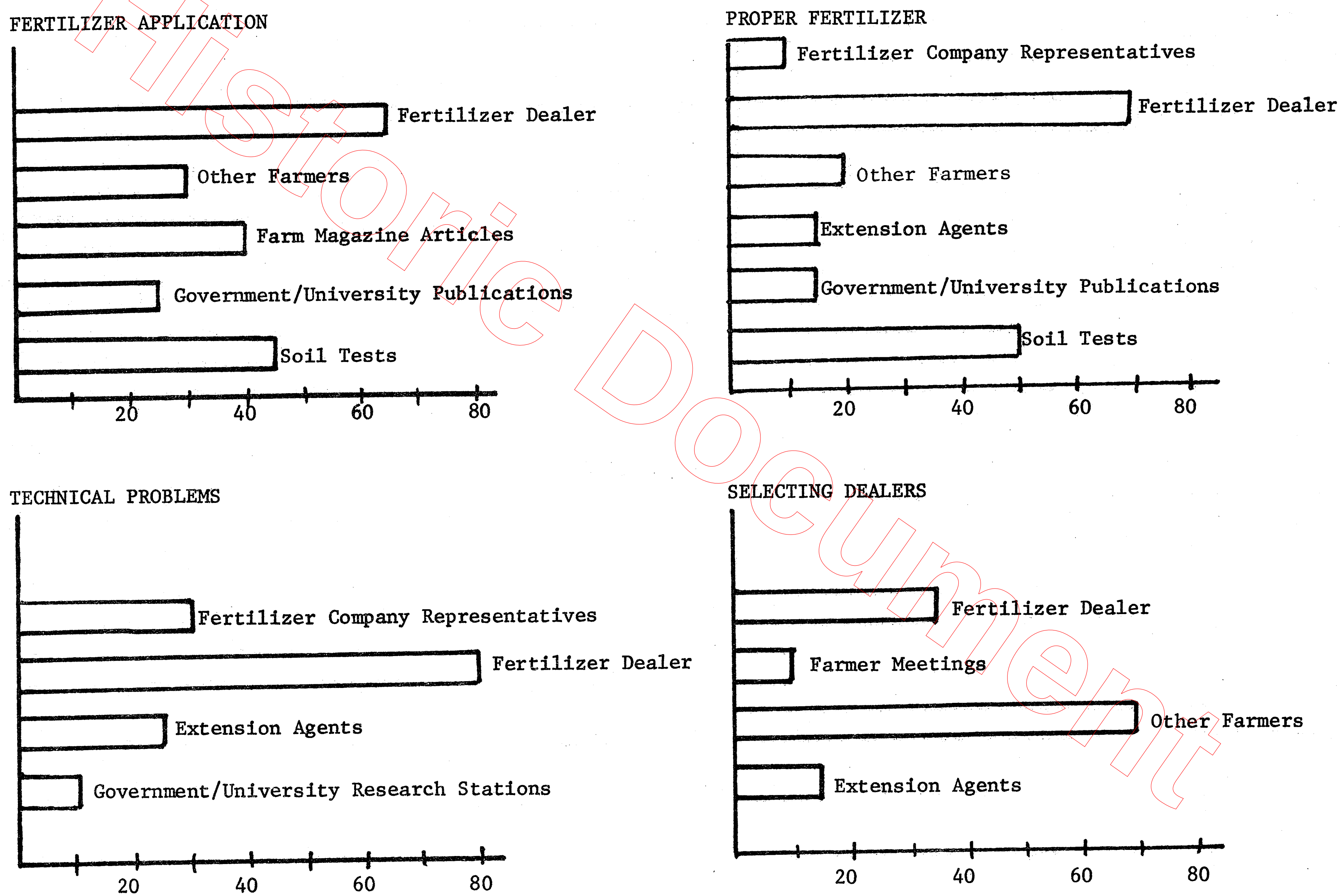


TABLE 2.4
FARMER DIFFERENCES IN THE EVALUATION OF
INFORMATION SOURCES, INDIANA, 1979

INFORMATION SOURCE	SIZE OF PURCHASE	TOTAL ACRES	GROSS INCOME	FARM TYPE	AGE	COUNTY
FERTILIZER APPLICATION						
Other Farmers					Under 35	
Fertilizer Dealers					Over 35	
Magazine Articles						
Soil Tests						Decatur
PROPER FERTILIZER						
Fertilizer Dealer						
Extension Agents						
Soil Tests						
Agronomists						
TECHNICAL PROBLEMS						
Company Represent.						
Fertilizer Dealer		Under 400 400-700				
Extension Agents	51-100					
Government/Univ.	Over 200	Over 200				
SELECTING DEALER						
Other Farmers					Under 55	Decatur
Fertilizer Dealer	51-100				Over 55	Jasper
Extension Agents	Over 200					

to solve technical problems, the fertilizer dealer ranks as one of the most important sources. Other sources were found to be important for providing specific types of information. For instance, in the case of fertilizer application, other farmers, farm magazine articles, university publications, and soil tests were judged to be of considerable importance, while soil tests were very important for providing information on the proper fertilizer to use for specific areas, and other farmers were found to be the most important for providing information to aid in dealer selection. It is interesting to note that fertilizer company representatives were considered important sources of information by only a small proportion of farmers and particularly in the area of solving technical problems. It is also interesting to observe the importance of word-of-mouth communications among farmers in the dealer selection area.

Table 2.4 presents the summary results concerning farmer differences in the evaluation of information sources in the four areas. Although not many differences were found, the most significant were: (1) there is a tendency for very large purchase farmers to use government and university personnel to solve technical fertilizer problems, and to use extension agents to make dealer selection decisions; (2) the smaller and medium acreage farmers are more likely to turn to their fertilizer dealer with technical problems than the larger acreage farmers; and (3) younger farmers are the most likely to seek information from other farmers, while middle age and older farmers are the most likely to turn to their fertilizer dealers.

2.3 Fertilizer Pricing

An important area in any analysis of fertilizer purchasing behavior is the area of fertilizer pricing. Two aspects of this topic were explored in this research and will be discussed in this section. These were the methods used by farmers in arriving at a price with a fertilizer dealer and the attitudes of farmers regarding the importance of price in dealer selection.

2.3.1 Pricing Methods

To determine how farmers arrive at prices with fertilizer dealers, each farmer was shown a lsit of nine possible methods and asked to indicate the one method which best described his behavior. The nine methods included in the list were obtained from a series of unstructured farmer interviews carried out prior to the structured survey reported in this paper.

The methods considered and the percentages of farmers using each are presented in Table 2.5. This information shows that three methods are most frequently used by Indiana farmers. These are (1) to contact a number of fertilizer dealers, get price quotes, and buy from the dealer with the lowest price; (2) to make up a list of fertilizer requirements and then contact a fertilizer dealer to place an order; and (3) to obtain prices from a few dealers before trying to make a deal with a preferred dealer. A fourth method, which is used by eight percent of the farmers in the sample, is to wait until a fertilizer dealer contacts the farmer and then place an order with that dealer.

In examining the three most important pricing methods it is interesting to note that they cover a very broad range of behavior. The first and third methods are similar in the sense that they involve a substantial amount of effort on the part of the farmer to get several price quotes. They are different, however, in the sense that the willingness of the farmer to select the lowest priced dealer in the first method

TABLE 2.5

PRICING METHOD USED BY INDIANA FARMERS, 1979

METHOD OF PRICING	PERCENTAGE OF FARMERS
I contact a number of fertilizer dealers, get price quotes, and buy from the dealer with the lowest price.	13
I make up a list of the fertilizer requirements I want, contact the fertilizer dealer and place an order.	46
I talk to other farmers about fertilizer prices they've been quoted before I make a deal with a fertilizer dealer.	3
I get a price quote from one dealer and then I go to another and ask him if he can do better.	2
I get a price quote from a fertilizer dealer and then try to get him to include certain services at that particular price.	2
I don't contact any fertilizer dealers, they contact me and I'll accept the best deal.	1
My fertilizer dealer contacts me, we talk about fertilizer requirements, and then I place an order.	8
I get a price quote from a fertilizer dealer, determine what I'm willing to pay, and then try to reach some agreement.	2
I obtain prices from a few dealers before trying to make a deal with a preferred dealer.	25

TABLE 2.6
FARMER DIFFERENCES IN METHODS OF PRICING, INDIANA, 1979

CHARACTERISTICS / VARIABLES	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
Contact number of dealers, get price quotes, buy from lowest price dealer	13 %						
makes a list of requirements, contacts a dealer and places an order	46 %	*** 51-100 101-200	*** 100-400 400-700	** Under 50 50-100			
Fertilizer Dealer contacts me and then I place an order	8 %	*** Under 50	*** Under 400	** Under 50			
I obtain prices from a few dealers before making decision, buys from preferred dealer	25 %	*** Over 200	*** Over 700	** 100-200 Over 200			

represents a fairly low degree of dealer loyalty, whereas the desire to purchase from a preferred dealer in the third method represents a much higher level of dealer loyalty. The second method, which simply involves contacting a dealer and placing an order, represents a lack of shopping and a high degree of dealer loyalty.

Table 2.6 presents the farmer differences related to methods of pricing. The results here show that the large purchase farmers tend to use the last method involving obtaining a number of price quotes before purchasing from a preferred dealer; the medium purchase farmers tend to use the second method wherein they simply contact a dealer and place an order; while the small purchase farmers tend to use the third method where they wait for a fertilizer dealer to contact them.

2.3.2 Pricing Attitudes

In addition to investigating the methods farmers use in establishing price with a fertilizer dealer, the research also looked at a number of important farmer attitudes related to fertilizer prices. These attitudes were measured by having the farmers respond to a series of attitude statements on a six point scale ranging from (1) strongly disagree to (6) strongly agree. Table 2.7 lists the statements used and the farmer responses, while Table 2.8 illustrates farmer differences in these responses.

The first statements were designed to measure farmers' price sensitivity in purchasing fertilizer. The responses to these statements indicate that about two-thirds of the farmers disagree and the other one-third agree with the ideas that price is the most important consideration in purchasing fertilizer, they usually buy from the lowest priced dealer in the area, and they would change fertilizer dealers without question for a price difference of five percent. On the other hand,

TABLE 2.7

RESPONSES TO PRICING ATTITUDE STATEMENTS, INDIANA 1979

Attitude Statement	Strongly Disagree Percent of Farmers	Disagree Percent of Farmers	Agree Percent of Farmers	Strongly Agree Percent of Farmers
1. Price is the most important consideration in choosing a fertilizer dealer.	33	38	27	2
2. I usually buy my fertilizer from the dealer with the lowest price in my area.	26	43	26	4
3. I would change fertilizer dealers without question for a price difference of five percent.	30	36	26	8
4. Establishing a good long term relationship with one fertilizer dealer is more important than any price savings which might be possible by changing dealers frequently.	6	21	36	27
5. There are substantial price differences among fertilizer dealers.	9	35	44	13
6. Price is a more important consideration when purchasing fertilizer in the Winter than it is when purchasing in the Spring.	7	17	52	23
7. The price of fertilizer is unreasonably high.	5	44	38	12
8. Certain types of fertilizer are much better values than other types.	5	13	53	29
9. Fertilizer containing micronutrients is not worth a premium price.	21	37	33	8

TABLE 2.8

FARMER DIFFERENCES IN RESPONSES TO PRICING ATTITUDE STATEMENTS, INDIANA 1979

CHARACTERISTICS / VARIABLES	ALL FARMERS[1]	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
Price is the most important consideration in choosing a fertilizer dealer	2.6	*** 100-200 Over 200	*** Over 200	** Over 200		** Under 35	
Usually buy from the dealer with the lowest price in my area	2.7	** 50-100 100-200 Over 200	** Over 200			** Under 35 35-44 45-54	* Decatur
Change fertilizer dealer for price difference of five percent	2.8						
Establishing long term relationship is more important than price savings	4.4						
There are substantial price differences among fertilizer dealers	3.7		** 400-700 Over 700	*** 100-200 Over 200		** Under 35 35-44	

TABLE 2.8

FARMER DIFFERENCES IN RESPONSES TO PRICING ATTITUDE STATEMENTS, INDIANA 1979

(Continued)

CHARACTERISTICS / VARIABLES	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
Price is more important in Winter than in Spring	4.3		Under 400 Over 200 *				Jasper **
The price of fertilizer is unreasonably high	3.5						
Certain types of fertilizer are better values than others	4.6			100-200 *	Mixed *		
Fertilizer containing micronutrients is not worth a premium price	3.1						

1 Calculated using a six-point scale ranging from (1) strongly disagree to (6) strongly agree. Highest numbers, therefore, represent greater agreement.

FIGURE 2.8 FARMERS' PERCEPTIONS OF FERTILIZER DEALER PROFITS
INDIANA, 1979

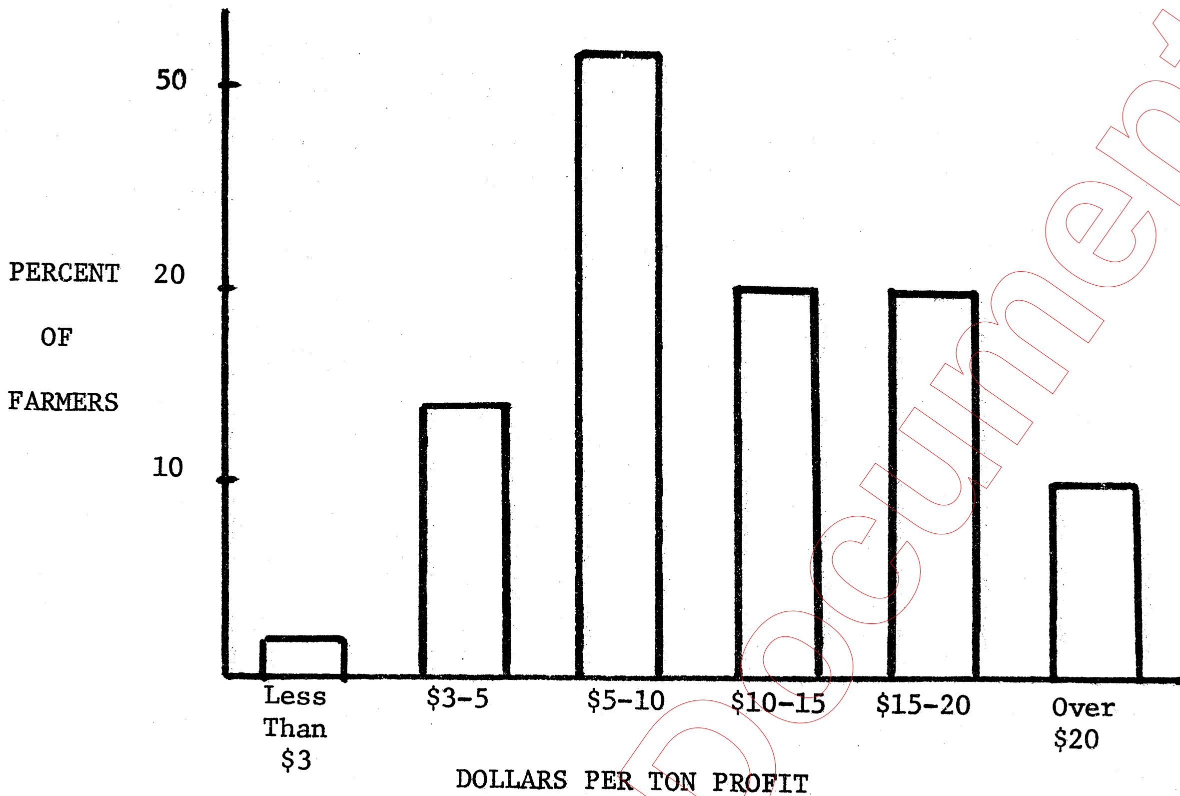
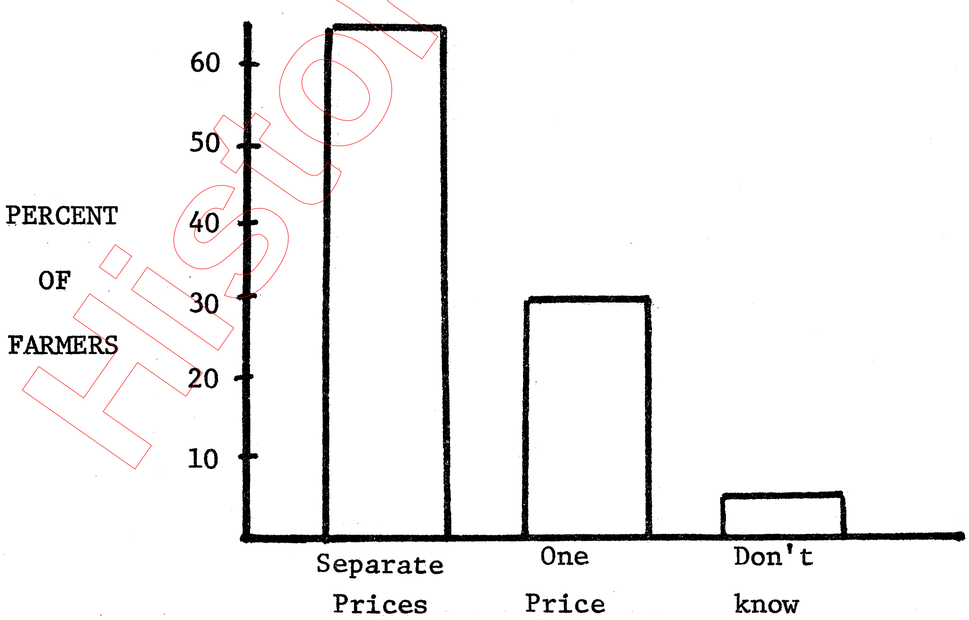


FIGURE 2.9 FARMER PREFERENCES FOR PRICING MATERIALS AND SERVICES
INDIANA, 1979



most farmers tend to agree with the idea that establishing a good long-term relationship with one fertilizer dealer is more important than any price savings which might be possible by changing dealers frequently. The information in Table 2.8 shows that there are some systematic farmer differences in the responses to these statements. The most important differences is the strong agreement to the first two statements expressed by larger farmers in the younger age brackets.

The fifth statement in Table 2.7 measures the extent to which farmers feel there are price differences among fertilizer dealers. Here the results show that well over half the farmers felt that substantial price differences exist among fertilizer dealers. Younger farmers who operate larger farming units showed more agreement with this statement than other farmers.

Responses to statement six indicates that three-quarters of the farmers, and particularly those operating small and large farms, feel price is a more important consideration in the Winter than in the Spring. In the case of statement seven, exactly one-half of the farmers expressed agreement with the idea that the price of fertilizer is unreasonably high. Finally, statement eight looks at farmers' perception of the relative value of different fertilizer types. Response here indicate strong agreement with the notion that there are important value differences among fertilizer types.

2.3.3 Other Pricing Issues

Two other areas related to pricing were investigated in the survey. The first area concerned farmers' preferences for having materials and services priced separately or together. The results in Figure 2.9 indicate that 65 percent of the farmers prefer separate prices, while 30 percent prefer one price and 5 percent had no opinion. No farmer differences were found for responses to this question.

The second area concerned farmers' perceptions of profits made by fertilizer dealers. To obtain information in this area the farmers were asked to respond to the question: Assume that a ton of fertilizer costs you $100, how much of that $100 do you think the fertilizer dealer makes in profit? Response to this question, shown in Figure 2.8, indicates that most farmers feel a fertilizer dealer makes between 5 to 15 percent profit on each ton of fertilizer he sells. As in the previous question, no farmer differences were found for responses to this question.

2.4 Product Line

An important concern in any organization deals with the question of what products should be included in the overall product line. An attempt was made to answer this question by presenting the farmers with a list of nine products, and for each product, asking them to indicate those that are currently available at their fertilizer dealer, and those they probably would purchase from their fertilizer dealer if they were available at a competitive quality and price. The nine products or product classes included in the anlaysis were: herbicides, insecticides, seed corn, other farm seeds, general farm supplies, feeds or premixes, animal health products, limestone, and micronutrients.

Figure 2.10 presents the summary results of these questions by showing the proportion of farmers who perceive each product to be available or not available from their fertilizer dealer. Moreover, the chart shows the proportion of farmers who currently purchase the products from their fertilizer dealer, as well as the proportion of farmers who would purchase the products from their fertilizer dealer if it were available. To illustrate the interpretation of this figure consider the case of other farm seeds. Here the results indicate that approximately 70 percent of the farmers felt this product was currently available from their fertilizer dealer, while 30 percent felt that it was not. Slightly under half of the farmers who felt the product was available (or about 30 percent of the total sample) indicated that they purchased other farm seeds from their fertilizer dealer in 1979, while about half of the farmers who felt the product was not available (or about 12 percent of the total sample) indicated that they would purchase other farm seeds from their fertilizer dealer if they became available in the future. Because of the manner in which Figure 2.10 is constructed, it readily shows two very important measures for each product: the extent to which the product is available but not purchased, and the extent to which the product is not available but probably would be purchased if dealers began to carry it.

Reference to Figure 2.10 shows, first of all, that all the products except limestone were felt to be available at many dealers. This was particularly true for herbicides, insecticides, farm seeds, and micronutrients which apparently are carried by over 70 percent of fertilizer dealers in these areas.

There is much greater variability in the extent to which each product which is available is currently purchased. Here the results indicate that over half of the farmers purchase only herbicides and insecticides from their fertilizer dealers. Fairly large percentages also purchase

FIGURE 2.10 PRODUCTS AVAILABLE AND PURCHASED AT FERTILIZER DEALERS, INDIANA, 1979

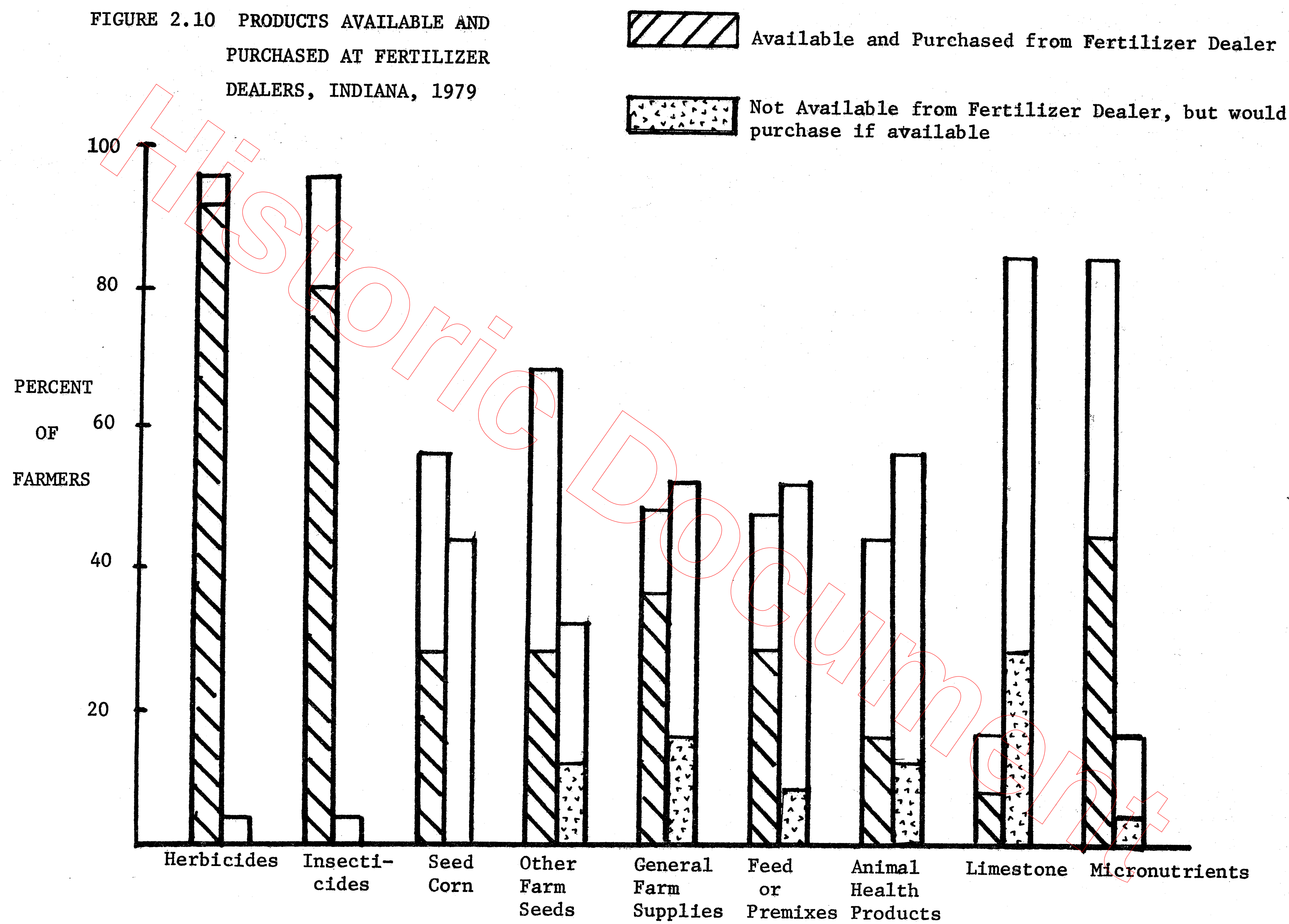


TABLE 2.9

FARMER DIFFERENCES IN PURCHASE OF PRODUCTS FROM FERTILIZER DEALERS, INDIANA, 1979

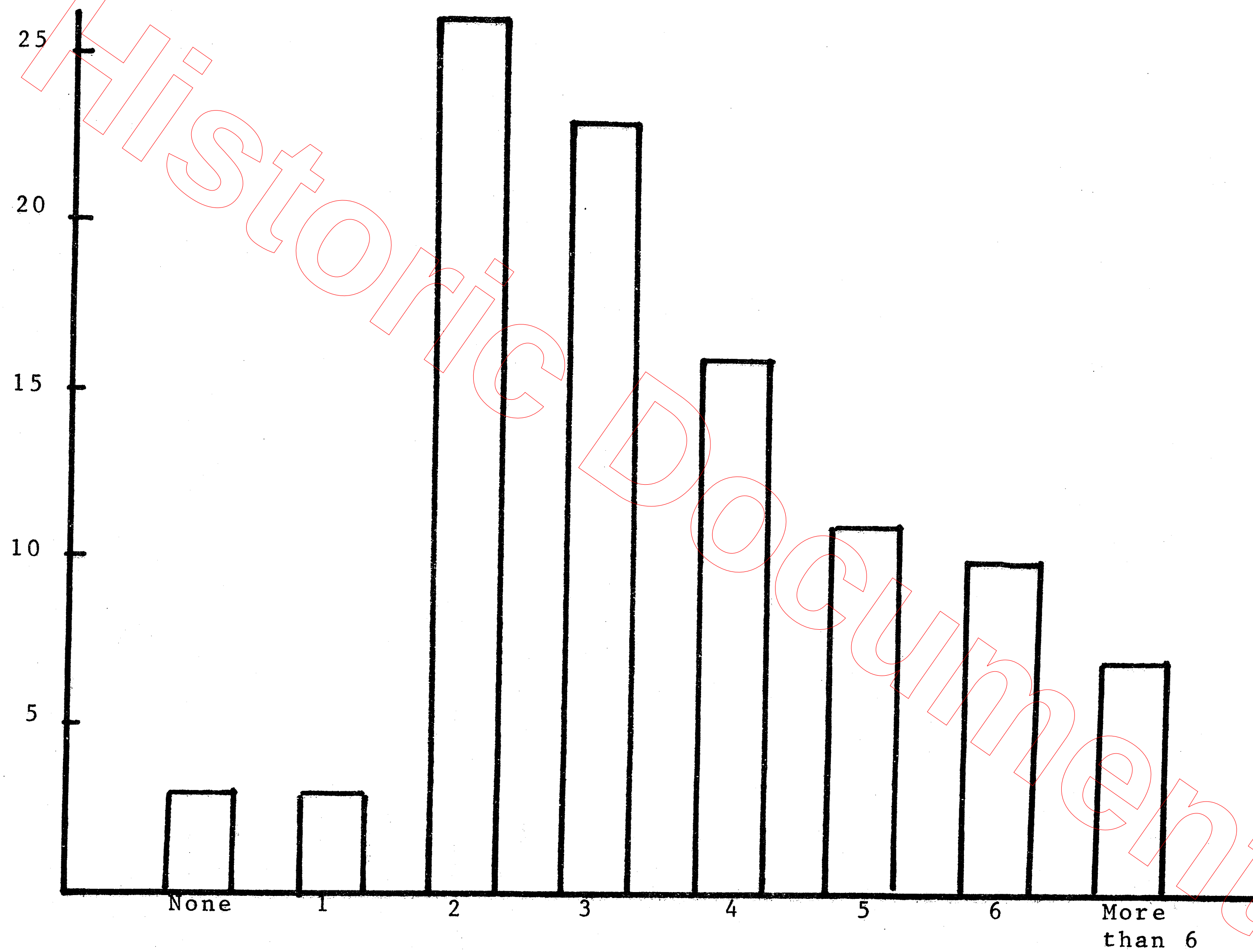
CHARACTERISTICS / PRODUCTS	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
HERBICIDES	93%						
INSECTICIDES	79%	* 51-100 100-200 Over 200		*** 50-100 100-200 Over 200			
SEED CORN	27%				* Livestock	* 45-54 Over 55	
OTHER FARM SEEDS	26%				* Livestock		
OTHER FARM SUPPLIES	38%				* Livestock		

TABLE 2.9

FARMER DIFFERENCES IN PURCHAS OF PRODUCTS FROM FERTILIZER DEALERS, INDIANA, 1979
(Continued)

CHARACTERISTICS / PRODUCTS	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (Acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
FEED OR PREMIXES	26%	* Under 50 Over 200	* Over 700		*** Livestock Mixed		
ANIMAL HEALTH PRODUCTS	17%	* Under 50 Over 200	** Over 700		*** Livestock Mixed		
LIMESTONE	7%	** Over 200	** Over 700	** Over 200			
MICRONUTRIENTS	43%	** 100-200 Over 200	* Over 700	* 50-100 100-200 Over 200	* Cash Crop Mixed	** Under 35 35-44	
NUMBER OF NON-FERTILIZER ITEMS PURCHASED	3.3	** Over 200	** Over 700				* Jasper

FIGURE 2.11 PURCHASE OF NON-FERTILIZER PRODUCTS, INDIANA, 1979



seed corn, other farm seeds, general farm supplies, feeds or premixes, and micronutrients from their fertilizer dealers, while very small percentages purchase limestone and animal health products.

Finally, with regard to products which are not available at fertilizer dealers the results show that only in the case of other farm seeds, general farm supplies, feed or premixes, animal health products, limestone, and micronutrients is there any unfilled demand. In all of these cases except limestone the proportion of farmers who probably would purchase the products at their fertilizer dealer is quite small.

Table 2.9 shows the type of farmers who are most likely to purchase each product from their fertilizer dealer. The most important results in this table are: (1) medium and large purchase farmers are the most likely to purchase insecticides from their fertilizer dealer; (2) livestock farmers have the greatest tendency to purchase a large number of products such as seeds, general farm supplies, feeds, and animal health products from their fertilizer dealer; (3) both the very small and the very large purchase farmers tend to purchase feeds and animal health products from their fertilizer dealer; and (4) the very large purchase farmers have the greatest tendency to purchase limestone and micronutrients from their fertilizer dealer.

Figure 2.11 shows the distribution of the number on non-fertilizer items purchased from fertilizer dealers. As illustrated, only about 3 percent of the sample did not purchase any non-fertilizer items from their fertilizer dealer while over 90 percent purchased two or more items. The average number of non-fertilizer items purchased was 3.3.

TABLE 2.10

EVALUATION AND PERCEIVED AVAILABILITY OF SERVICES, INDIANA, 1979

Service	Evaluation				Availability		
	Absolutely Necessary %	Probably Use %	Probably Not Use %	Do Not Want %	Yes %	No %	Don't Know %
Provide custom blending of fertilizer....	87	9	3	--	95	5	--
Have enough application equipment to eliminate waiting during busy seasons.......	84	14	2	--	83	15	2
Obtain the advice of experts from companies, universities, etc. in the event of problems with your fertilizer....................	83	16	1	--	93	4	3
Have only new or completely reconditioned application equipment..................	81	15	4	--	81	17	2
Have a person on staff who can provide expert help (and make farm visits if necessary) in the event of problems with your fertilizer.........................	79	19	2	--	87	11	2
Provide custom application of fertilizer.	80	15	5	--	100	--	--
Provide soil testing....................	76	17	6	1	96	2	2
Keep you up to date on new developments in fertilizer products and/or services...	70	27	3	--	86	10	4
Have a person on staff who will give you expert help regarding fertilizer and herbicide planning for your land and crops...	73	20	7	--	84	14	2
Sponsor farm meetings you can attend.....	47	39	16	2	91	7	2

TABLE 2.10

EVALUATION AND PERCEIVED AVAILABILITY OF SERVICES, INDIANA, 1979 (continued)

Service	Evaluation				Availability		
	Absolutely Necessary %	Probably Use %	Probably Not Use %	Do Not Want %	Yes %	No %	Don't Know %
Provide custom application of herbicides	51	25	19	5	95	4	1
Provide plant tissue analysis..........	40	38	19	3	60	16	24
Provide agronomic information about crops you grow or plan to grow in the form of brochures, newsletters, or similar publications.....................	30	46	19	6	62	33	5
Provide custom application of insecticides	38	26	30	6	84	11	4
Demonstrate new and existing fertilizer products and application equipment through demonstration plots, exhibits, etc......	22	46	25	7	50	44	6
Provide separate loading areas based on size of load you are picking up to shorten lineups..............................	25	39	21	14	36	60	4
Provide custom application of limestone	16	44	30	10	43	53	4
Provide a complete crop management service including field scouting, crop records, etc.	15	31	40	13	28	57	15
Provide custom grain seeding (barley, oats, etc.) using bulk spreaders........	7	23	40	29	44	47	9
Buy, or contract to buy all or a portion of your grain..........................	9	24	13	53	40	58	2

TABLE 1

FARMER DIFFERENCES IN THE EVALUATION OF SERVICES, INDIANA, 1979

CHARACTERISTICS / SERVICES	ALL FARMERS[1]	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
Provide custom blending of fertilizers	1.1		Over 700 *				Decatur *
Have enough application equipment to eliminate waiting	1.2						
Obtain the advice of experts in the event of problems	1.2						Decatur *
Have only new of completely recondition-ed equipment	1.2		100-400 **			Over 55 *	Decatur *
Have a person who can provide expert help and make farm visits	1.2			Under 50 50-100 100-200 *			Decatur **
Provide custom appli-cation of fertilizer	1.2		400-700 Over 700 *			45-54 *	
Provide soil testing	1.3						Decatur **

TABLE 2.11

FARMER DIFFERENCES IN THE EVALUATION OF SERVICES, INDIANA, 1979

(continued)

Services / Characteristics	All Farmers	Size of Purchase (tons)	Total Acres (acres)	Gross Income ($000)	Farm Type	Age	County
Keep you up-to-date on new developments	1.3					* 45-54 over 55	
Have a person to help plan fertilizer and herbicide programs	1.4					* 35-44	* Decatur
Sponsor farmer meetings	1.7			*** under 50 100-200	* cash crop	*** 35-44 45-54 over 55	
Provide custom application of herbicide	1.8					* 45-54 over 55	*** Jasper
Provide plant tissue analysis	1.8		** under 400 over 700				
Provide agronomic information in form of brochures	2.0						
Provide custom application of insecticides	2.0						*** Jasper

Table 2.11
FARMER DIFFERENCES IN THE EVALUATION OF SERVICES, INDIANA, 1979
(continued)

Characteristics / Services	All Farmers	Size of Purchase (tons)	Total Acres (acres)	Gross Income ($000)	Farm Type	Age	County
Demonstrate new products and equipment	2.2		* over 700			* under 35 35-44	
Provide separate loading areas based on size of load	2.3					* under 35	
Provide custom application of limestone	2.3				*** cash crop mixed		*** Jasper
Provide a complete crop management service	2.5		** over 700		* livestock		* Decatur
Provide custom grain seeding	2.9				*** livestock mixed	** under 35 45-54	*** Decatur
Buy, or contract to buy, grain	3.1						*** Jasper

Calculated from the four point scale used by the farmers to evaluate each service. The scale values were: (1) absolutely necessary, (2) probably use, (3) probably not use, (4) don't want

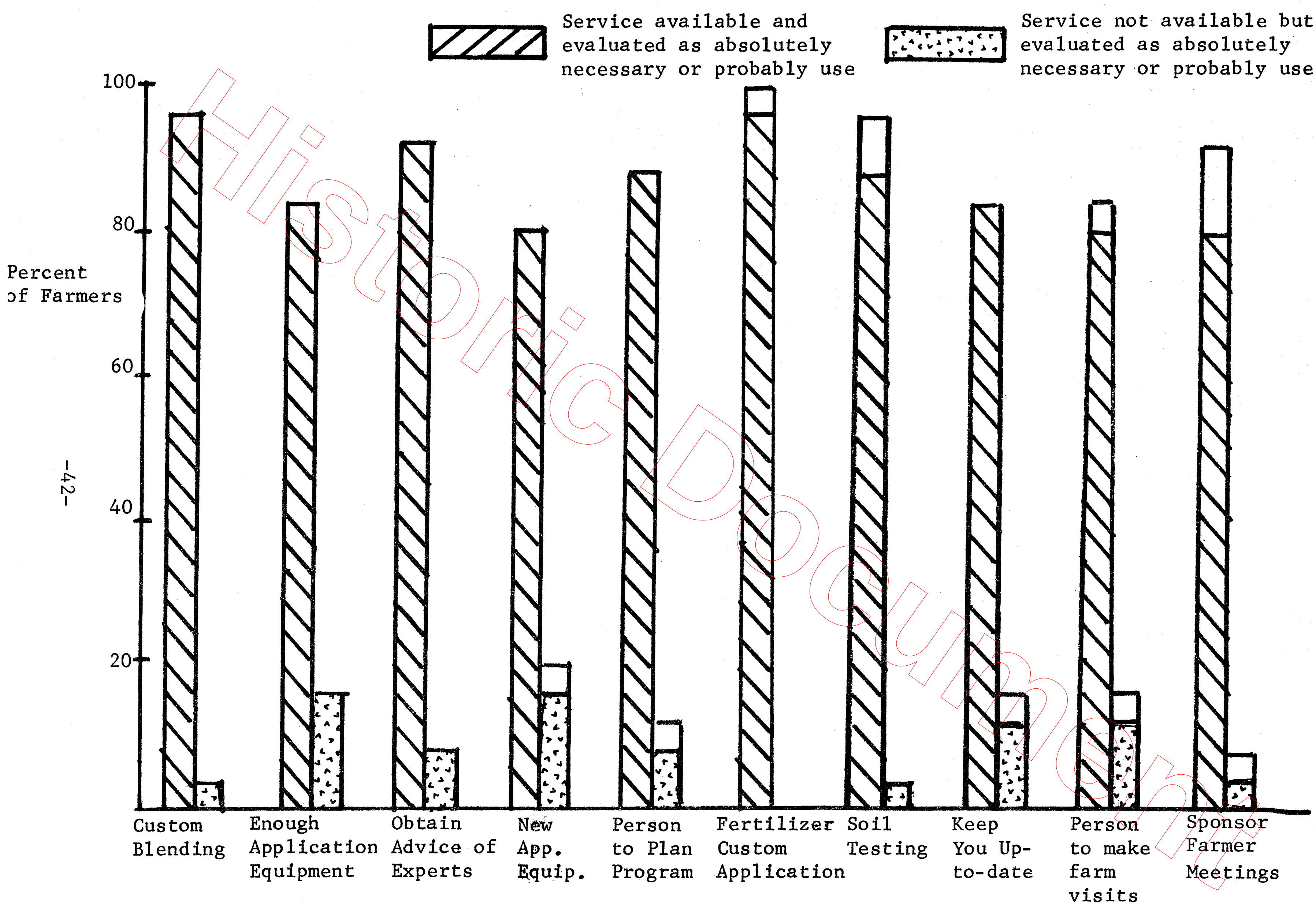


FIGURE 2.12

SERVICE AVAILABILITY AND USE, INDIANA, 1979

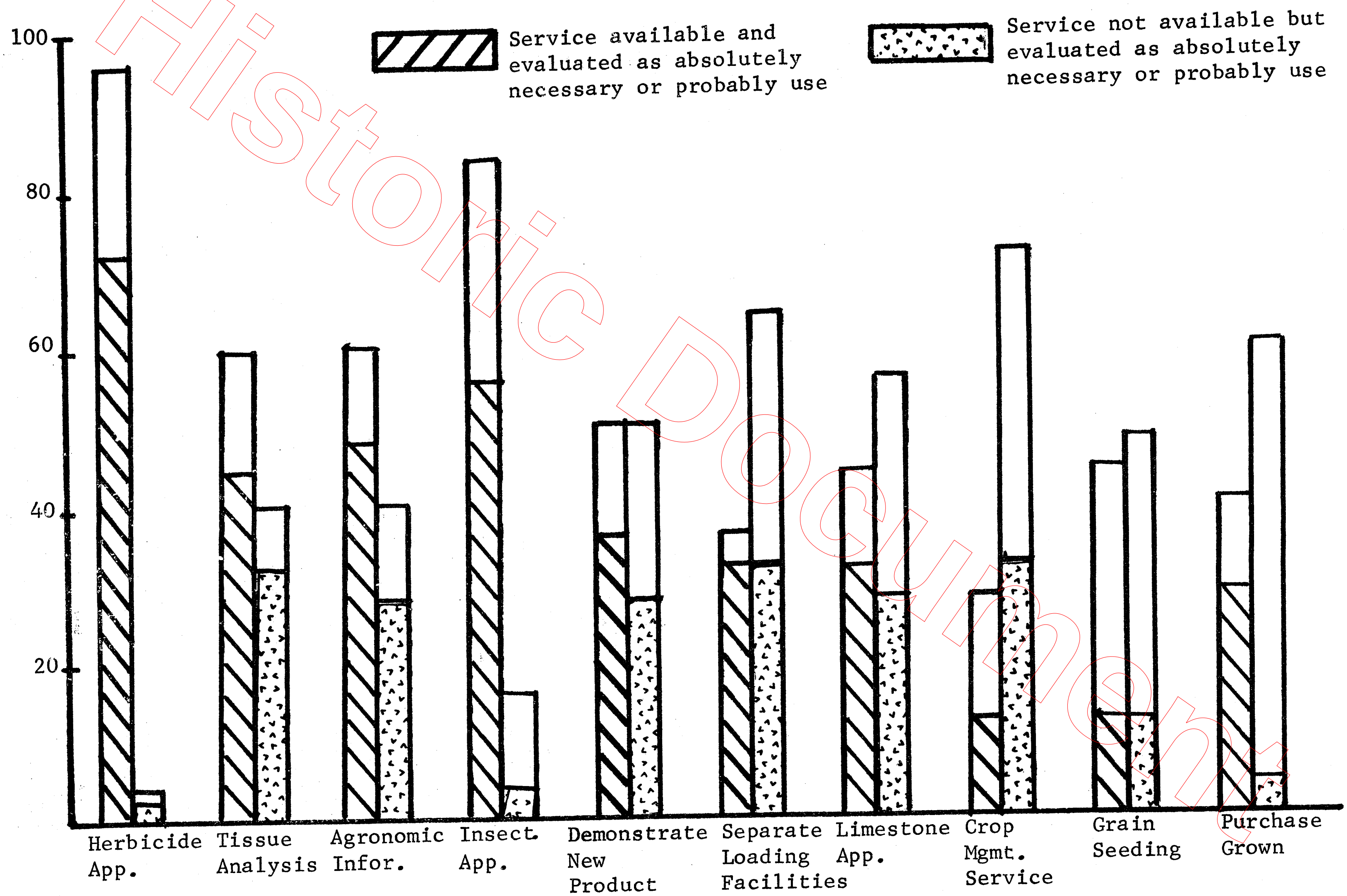


FIGURE 2.12

SERVICE AVAILABILITY AND USE, INDIANA, 1979
(continued)

2.5 Dealer Services

In addition to making decisions with respect to what products to include in the overall product line, fertilizer dealers also have to make decisions regarding the particular services they will provide for their customers. An attempt was made to answer this question by presenting the farmers with a list of twenty services fertilizer dealers currently provide, or might be able to provide in the future. For each service the farmers were asked to indicate whether or not it was currently available at their fertilizer dealer, and their evaluation of the importance of the service. To make this evaluation they were asked to rate each service on a four point scale containing the following descriptions: (1) absolutely necessary that your fertilizer dealer provide this service; (2) not absolutely necessary that your fertilizer dealer provide this service; but you would probably use it if it were available at a competitive quality and price; (3) all right for your fertilizer dealer to provide this service, but you would probably not use it even if it were available at a competitive quality and price; and (4) don't want your fertilizer dealer to provide this service. The basic idea of the scale, of course, was to get some idea of the importance farmers attach to each of the services.

Responses to the evaluation and availability questions are shown in Table 2.10 with the services ranked in decreasing order of importance. As can be seen in this table, the ten most important services are related to fertilizer application and blending, and the provision of fertilizer and crop information. Particularly important are: (1) the provision of custom fertilizer blending; (2) the condition and availability of application equipment; (3) the provision of information through people on staff, outside experts and farmer meetings; (4) the provision of custom application services and (5) the provision of soil testing services. Several other services such as custom application of herbicides and insecticides, demonstrations, and plant tissue analysis were judged to be of importance to fairly large percentages of farmers. Some services, on the other hand, such as purchasing grain, providing custom grain seeding, and providing a complete crop management service were felt to be relatively unimportant. As a matter of fact, in most of these cases, a quarter to a half of the farmers in the sample expressed the opinion that they did not want their fertilizer dealer to provide these services at all.

As expected, there are differences among farmers in their needs for the above services. Table 2.10 lists the twenty services considered, and, for each service, the type of farmer evaluating that service as being more important. The most significant findings in this table are: (1) farmers with larger operations are the most concerned with custom blending, custom application, plant tissue analysis, and demonstrations; (2) older farmers rate the condition of application equipment, custom application, farmer meetings, and information on new developments more important than younger farmers; (3) younger farmers, on the other hand, rate demonstrations, separate loading facilities, and a person on staff to help plan fertilizer and herbicide programs more important than older farmers; and (4) cash crop farmers are more concerned with farmer meetings and limestone application while livestock farmers, particularly the large ones, are more concerned with the provision of complete crop management services.

Figure 2.12 summarizes the detailed results contained in Table 2.10 by showing the proportion of farmers who perceived each service to be available or not available from their fertilizer dealer. For each availability situation, the chart also shows the proportion of farmers that evaluated the service as being absolutely necessary or one they would probably use even though they didn't consider it absolutely necessary. To illustrate the interpretation of the graph consider the case of having a person available to make farm visits in the event of problems. Here the results indicate that almost 80 percent of the sample felt this service was currently available from their fertilizer dealer, while about 20 percent felt the service was not available. Of those farmers who felt the service was available, all but a few also felt that it was absolutely necessary for their dealer to provide, or a service they would probably use if available. In a like manner, almost all of those farmers who felt the service was not available, also felt it was a very important service and one they would probably use if it were available. Because of the manner in which Figure 2.12 is constructed, it clearly shows the extent to which each service is available but not used, and the extent to which each service that is not available probably would be used if made available in the future.

Reference to Figure 2.12 indicates that for many services, particularly those perceived as being relatively important by a large proportion of farmers, there is very little difference between availability and use. This is not the case for those services perceived as being relatively less important. In these instances the matching of service supply with demand is not very good. For example, in the cases of tissue analysis, agronimic information, demonstrations, separate loading facilities, limestone application, and crop management sources, there are sizeable groups of farmers who would most likely utilize these services if they would be made available by their fertilizer dealer. Also, there are some instances, most notably insecticide application, crop management services, and grain seeding, where the services are thought to be available at specific dealers but not widely used.

2.6 Dealer Patronage

An important area in the analysis of farmer fertilizer purchasing behavior is dealer patronage. This section discusses this topic in terms of the type of dealer used, reasons for dealer selection, distance of dealer from farm, number of dealers in the immediate area, number of dealers used, reasons for splitting purchases, and dealer loyalty. A subsequent publication explores the dealer selection decision in much greater depth through the use of a multi-attribute attitude approach.

2.6.1 Type of Dealer Used

The first step in the analysis of dealer patronage was to classify the individual dealers into groups and determine the extent to which each group was used in 1979. The development of a classification scheme for dealers was necessary because over 70 different dealers (outlets) were cited by the sample farmers. The classification scheme developed for this analysis consisted of the following groups: (1) retail outlets of major fertilizer suppliers, (2) retail outlets of cooperatives, (3) independent dealers with multiple outlets and production facilities, (4) single outlet independent dealers with production facilities, and (5) single outlet independent dealers without production facilities.

TABLE 2.12

TYPE OF DEALER USED, INDIANA, 1979

	Percentage of Farmers Purchasing					
	Bulk Blends	Bulk Materials	Bagged Fertilizers	Liquid Nitrogens	Liquid Mixes	Anhydrous Ammonia
Retail outlets of major fertilizer suppliers.	22	18	21	28	29	40
Retail outlets of central coop and all independent coops.	32	35	21	30	34	37
Independent dealers with multiple outlets and production facilities.	27	18	28	20	16	6
Single outlet independents with production facilities.	17	28	21	20	20	15
Single outlet independents without production facilities.	1	2	7	2	1	0

TABLE 2.13

FARMER DIFFERENCES IN THE TYPE OF DEALER USED, INDIANA, 1979

Characteristics / Type of Dealer	All Farmers	Size of Purchase (tons)	Total Acres (acres)	Gross Income ($000)	Farm Type	Age	County
Retail Outlet of Major Fertilizer Supplier	17%		* under 400 400-700				
Retail Outlet of Central Cooperative and All Independent Cooperatives	38%						** Jasper
Independent Dealers with Multiple Outlets and production	21%		* under 400				** Decatur
Single Outlet Independent Dealers with Production Facilities	21%						
Single Outlet Independent Dealers without Production Facilities	2%						

The extent to which farmers use these dealer types is shown in Table 2.12 for each type of fertilizer, and Figure 2.13 for all fertilizers. These results indicate that cooperatives as a whole account for the largest percentage of fertilizer sales followed by multiple outlet independent dealers single outlet independent dealers, and retail outlets of major suppliers. Single outlet independent dealers without production facilities account for a very small percentage of total fertilizer sales. For the most part there are only small differences in the overall percentages when broken down by type of fertilizer with the exception of anhydrous ammonia which is dominated by retail outlets of major suppliers.

Table 2.13 shows the farmer differences associated with the use of various dealer types. The most significant result in this table is the lack of systematic differences associated with the use of dealer types. In other words, except for some tendency for smaller acreage farmers to use the retail outlets of major suppliers and independent dealers with multiple outlets, there are no other significant relationships between farm characteristics and type of dealer used.

2.6.2 Reasons for Dealer Selection

The reasons given by the sample farmers for selecting their dealers are shown in Table 2.14 for each of the six major types of fertilizer considered in this study. The questions in this area were free response type questions so the entire range of responses are presented in Table 2.14 even though some responses were mentioned by only a few farmers. This is done to demonstrate the wide variety of reasons farmers have for their behavior in this area.

The results in Table 2.14 show that while there are some

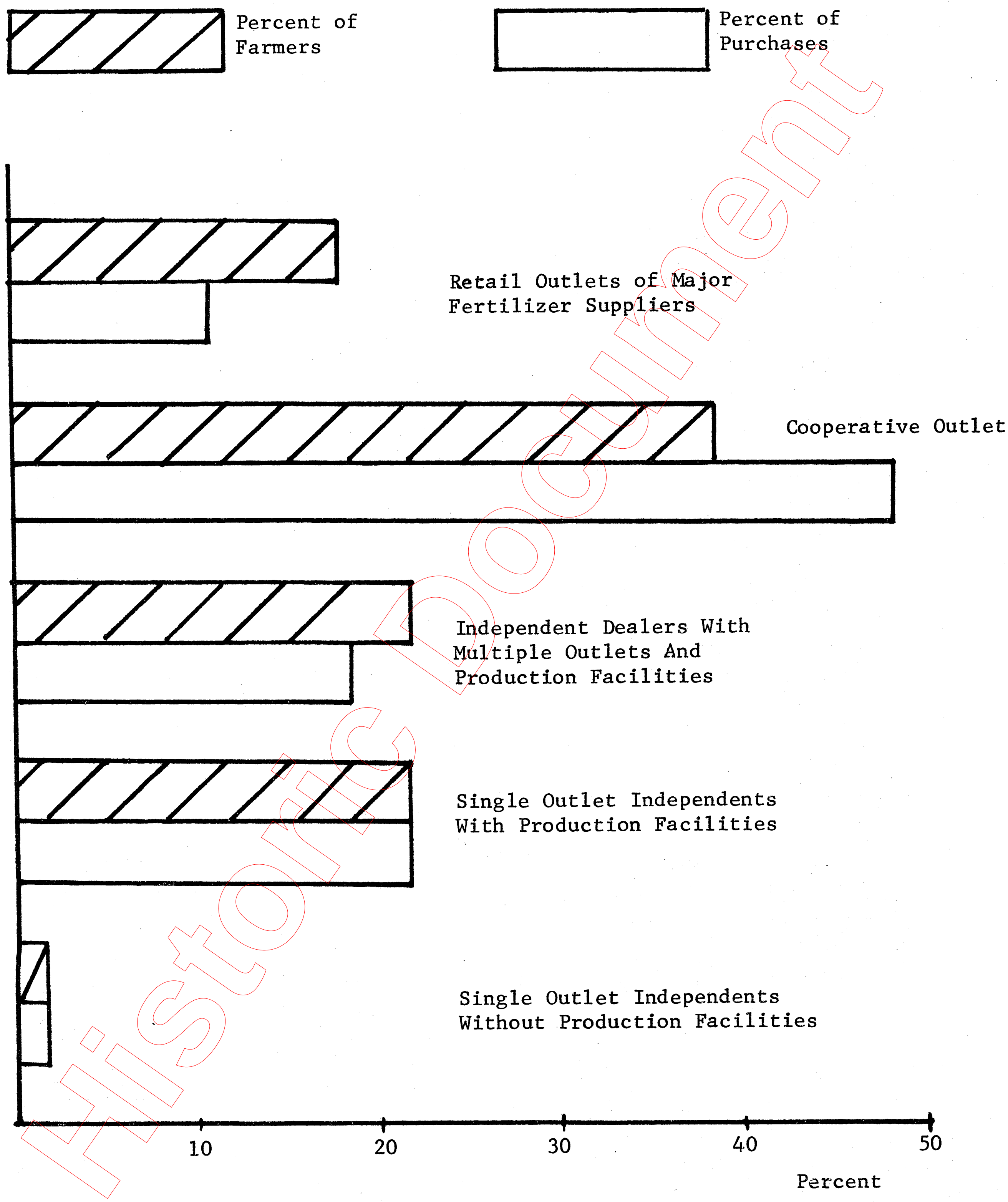


FIGURE 2.13
TYPE OF DEALER USED, INDIANA, 1979

TABLE 2.14

REASONS FOR DEALER SELECTION, INDIANA, 1979[1]

Reasons	Dry Bulk and Custom Blends		Dry Bulk Materials		Dry Bagged Blends and Materials[2]	
	Main Reason %	Other Mentions %	Main Reason %	Other Mentions %	Main Reason %	Other Mentions %
Dealer is close	20	14	23	15	8	8
Price is cheaper	23	25	30	19	25	17
Availability of product when needed	15	36	8	15	25	--
Dealer loyalty	13	9	8	2	--	17
Buy or sell other products at dealer	2	1	--	--	--	8
Equipment considerations	2	11	6	4	--	--
Availability of specific products	2	2	--	--	17	--
Dealer is personal friend/relative	5	13	4	12	8	8
Good delivery	2	4	--	--	--	--
Coop member/shareholder	3	--	4	2	--	--
Good working relationship with dealer	1	4	2	2	8	--
Availability of specific services	--	--	2	2	--	--
Discounts or dividends	--	--	--	--	--	8
Good quality products	--	3	2	6	--	--
Dealer has good fertilizer set-up	2	2	--	--	--	--
Have good custom application service	4	8	2	12	--	--
Interested dealer/staff	2	8	2	2	--	--
Knowledgeable dealer/salesman/staff	1	4	2	6	--	--
Contractual arrangement	--	--	--	--	--	--
Dealer is my landlord	--	--	--	--	--	--
Gives complete soil analysis	2	1	--	--	--	--

TABLE 2.14

REASONS FOR DEALER SELECTION, INDIANA, 1979
(continued)

Reasons	Liquid Nitrogens		Liquid Mixes		Anhydrous Ammonia	
	Main Reason %	Other Mentions %	Main Reason %	Other Mentions %	Main Reason %	Other Mentions %
Dealer is close	20	15	22	8	29	8
Price is cheaper	18	19	24	15	21	17
Availability of product when needed	18	11	11	17	15	23
Dealer loyalty	10	5	7	2	5	2
Buy or sell other products at dealer	--	--	4	2	--	--
Equipment considerations	2	3	3	7	5	5
Availability of specific products	--	--	6	1	5	1
Dealer is personal friend/relative	4	5	3	7	4	6
Good delivery	--	--	4	4	2	1
Coop member/shareholder	--	--	--	--	2	--
Good working relationship with dealer	2	4	3	5	1	2
Availability of specific services	3	2	--	--	--	--
Discounts or dividends	--	--	--	--	--	--
Good quality products	--	--	--	--	--	--
Dealer has good fertilizer set-up	--	--	--	--	--	--
Have good custom application service	7	10	2	3	--	6
Interested dealer/staff	--	2	--	--	2	5
Knowledgeable dealer/salesman/staff	1	4	1	3	1	3
Contractual arrangement	--	--	2	--	--	--
Dealer is my landlord	2	--	--	--	--	--
Gives complete soil analysis	--	--	--	2	--	--

1 The numbers refer to the percentages of farmers purchasing each type of fertilizer.

2 Twelve observations.

TABLE 2.15

FARMER DIFFERENCES IN REASONS FOR DEALER SELECTION, INDIANA, 1979

Characteristics / Reasons	All Farmers	Size of Purchase (tons)	Total Acres (acres)	Gross Income ($000)	Farm Type	Age	County
Price	2%	* 100-300 over 200	** over 700	* over 200		** 35-44	
Location	2%	* under 50 50-100 100-200	** under 400 400-700	* under 50 50-100 100-200		** 45-54	
Availability	26%	* under 50 50-100	** under 400			** under 35 over 55	

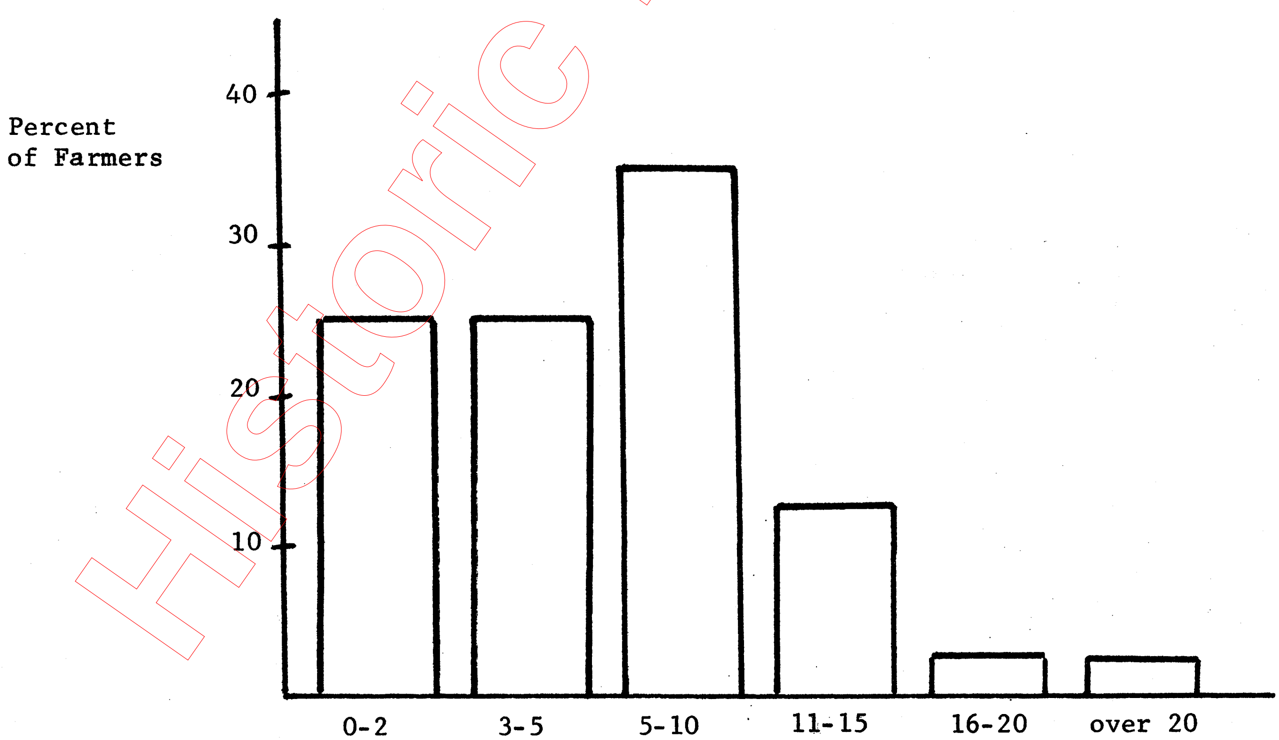
Table 2.16

NUMBER AND DISTANCES OF DEALERS FROM FARM, INDIANA, 1979

	All Farmers	Jasper	Decatur
Number of dealers within 5 miles	2.1	2.0	2.2
Number of dealers within 10 miles	5.3	5.3	5.3
Miles to nearest dealer	3.5	3.7	3.3
Miles to main dealer	6.7	7.2	6.0
Purchase from nearest dealer	45%	48%	40%

FIGURE 2.14

MILES TO MAIN DEALER, INDIANA, 1979



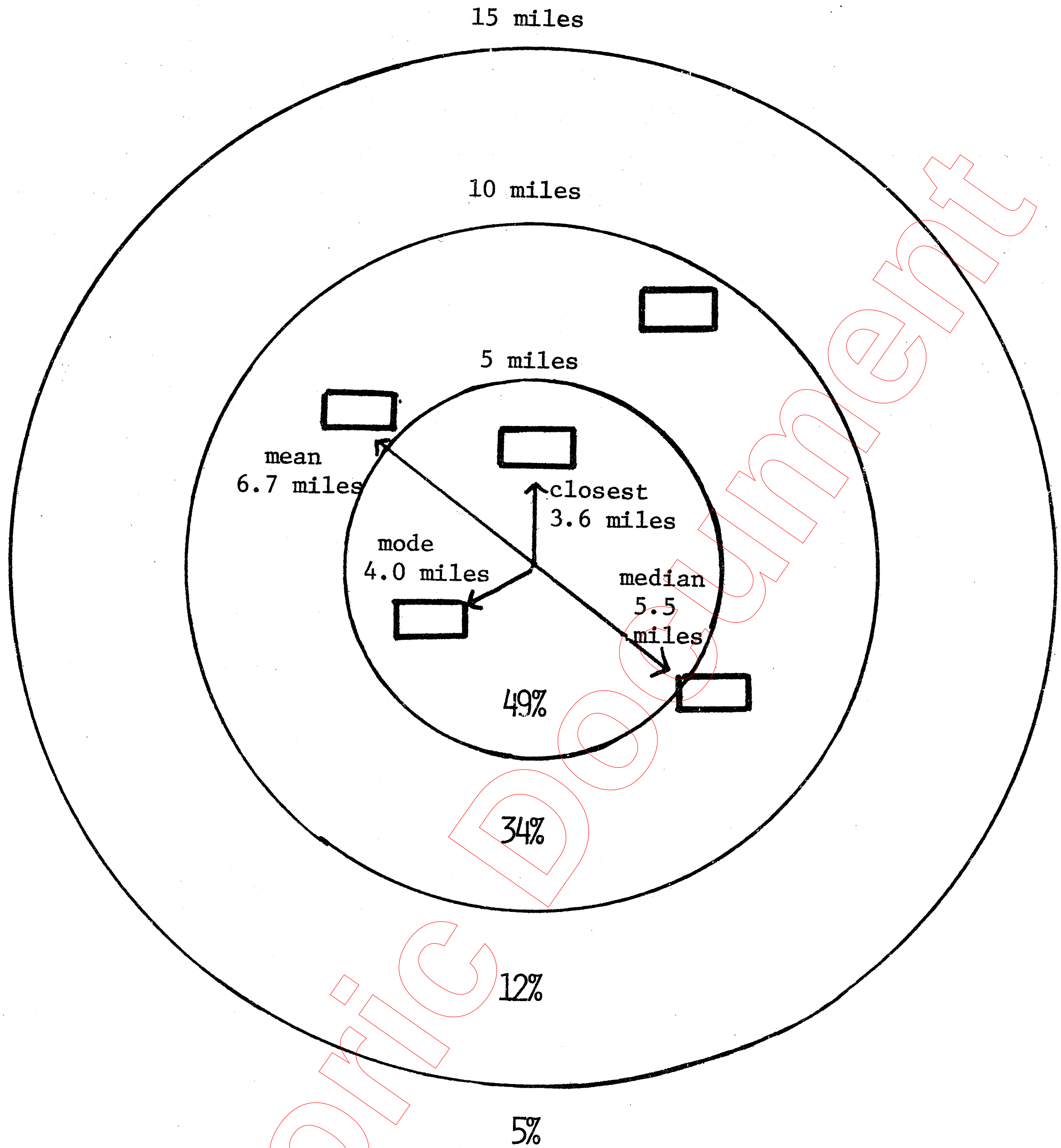


FIGURE 2.15

TRADING AREA FOR FERTILIZERS, INDIANA, 1979

TABLE 2.17

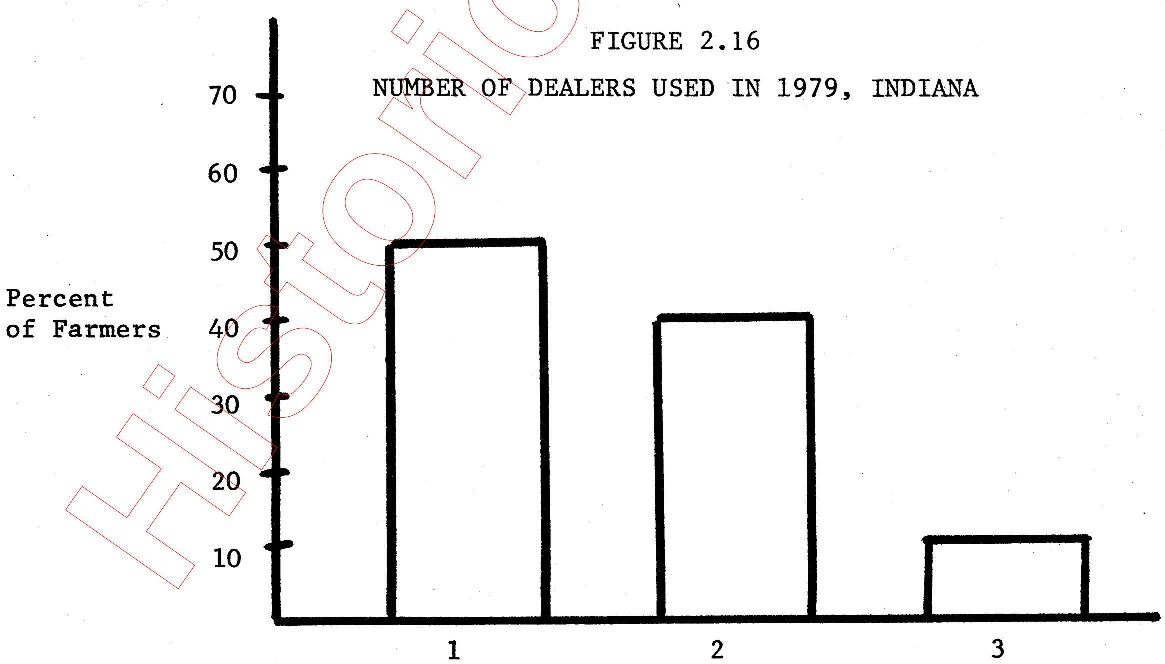
REASONS FOR USING MORE THAN ONE DEALER, INDIANA, 1979

REASONS	PERCENT OF FARMERS[1]
Availability of specific fertilizer products	43
Price considerations	43
Close for a specific product	26
Availability of specific service	18
Better service at particular dealer	18
Availability of specific application equipment	11
Good dealer relationship	11
Spread fertilizer business among dealers	10
Dealer loyalty	3

[1] Percent of farmers who used more than one dealer in 1979

FIGURE 2.16

NUMBER OF DEALERS USED IN 1979, INDIANA



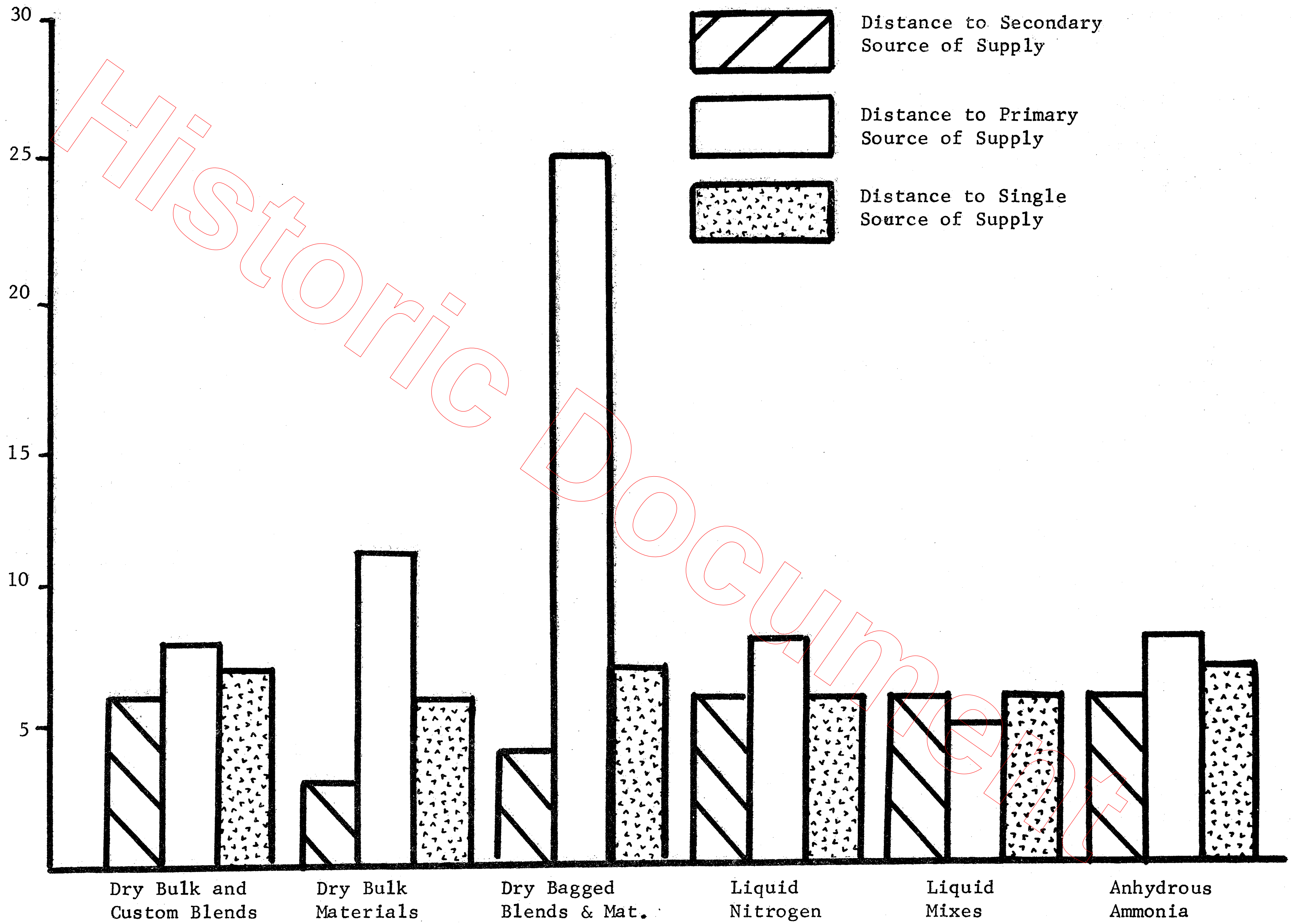


FIGURE 2.17

DISTANCES TO MOST IMPORTANT AND SECONDARY S‾‾RCES OF SUPPLY FOR FERTILIZERS, INDIANA, 1979 differences among fertilizer types in the reasons for dealer selection, three reasons are common to all types and are of major importance. These are dealer is close, price is cheaper, and availability of product when needed. Table 2.15 shows that there are some important differences among farmers in the extent to which they cite these three reasons for dealer selection. Essentially these results indicate that larger farmers are more concerned with price, whereas small and medium farmers are more concerned with dealer location, and very small farmers with availability when needed.

2.6.3 Distance from Farm

After questioning each farmer about his reasons for dealer selection, a series of questions was asked concerning the number of dealers in the area and the distance from the farm to these dealers. The results of these questions are shown in Table 2.16 and Figures 2.14 and 2.15.

The data in Table 2.16 reveals that the average farmer has two fertilizer dealers within 5 miles of his farm, and five fertilizer dealers within 10 miles. The nearest dealer to the farm is 3.5 miles away and the distance to the farmer's main dealer is 6.7 miles. Despite this, 45 percent of the farmers in the sample purchased from their nearest fertilizer dealer. The distribution of farmers with respect to distance to main dealer shown in Figure 2.14 illustrates that while most fertilizer pruchases are made within a ten mile radius of the farm, over 15 percent of the farmers purchase from dealers at greater distances. The first two rows of Table 2.18 show that there are no farmer differences in the distance to the main dealer and the extent to which farmers purchase from their nearest fertilizer dealer.

2.6.4 Number of Dealers Used

As illustrated in Figure 2.16, half of the farmers use only one fertilizer dealer at any time. About 40 percent of the farmers, however, use two dealers at the same time, and about 10 percent of the farmers use three. The reasons given by the farmers for using more than one dealer are listed in Table 2.17. The most important reasons are the availability of specific fertilizer products, services, and application equipment together with price considerations and dealer closeness. Thus it appears that in many cases farmers use a second fertilizer dealer either as a bargaining tool to obtain better prices, or because their regular fertilizer dealer does not have specific products, services, or equipment that the farmer needs. Table 2.18 shows that both the very small and very large gross income farmers and farmers in the younger age categories were more likely to use a larger number of dealers during 1979 than other types of farmers.

Figure 2.17 combines the above information with data on dealer distance to see if there is any relationship between the two. More specifically, this figure shows three distances for each fertilizer type: distance to single source of supply for those farmers using only one dealer, and distance to primary source and secondary source for those farmers using two fertilizer dealers. A primary source is one which accounts for more than half of a farmers business, whereas a secondary source is one which accounts for less than half. In most cases where farmers did split their purchases between two dealers, the split was very lopsided with the secondary dealer accounting for only ten to twenty percent of total purchases.

The information in Figure 2.17 shows a very interesting pattern: in all cases, except liquid mixes, where a farmer splits his purchases between two dealers, the primary dealer is located further away than the secondary dealer. Apparently, farmers who use more than one dealer are willing to purchase most of their fertilizer at greater distances, but, for a variety of reasons, want to purchase some nearer to home.

2.6.5 Dealer Loyalty

In addition to providing information on dealer use in 1979, each farmer was asked to give a complete record of dealers used over the past five years. Results of this question have been summarized in terms of total number of dealers used and number of dealers switches over the past five years and are shown in Figures 2.18 and 2.19. First, with regard to number of dealers used over the past five years, the distribution of Figure 2.19 shows that about 20 percent of the farmers used only one dealer during this period of time, 35 percent used two dealers, and a further 35 percent used three or more. Only a small percentage of the sample used four or five dealers during the past five years.

Analysis of these purchasing records also permitted an examination of switching behavior. Results here, illustrated in Figure 2.18, show that approximately 40 percent of the sample made no dealer changes at all during the five year period 1975 to 1979, hence exhibited a very high degree of dealer loyalty. An additional 40 percent made one dealer change, 20 percent made two changes, and approximately 10 percent made three or four changes during this same period of time. Those farmers who made some dealer switches, particularly those who made two or more switches in five years, exhibited a low degree of dealer loyalty.

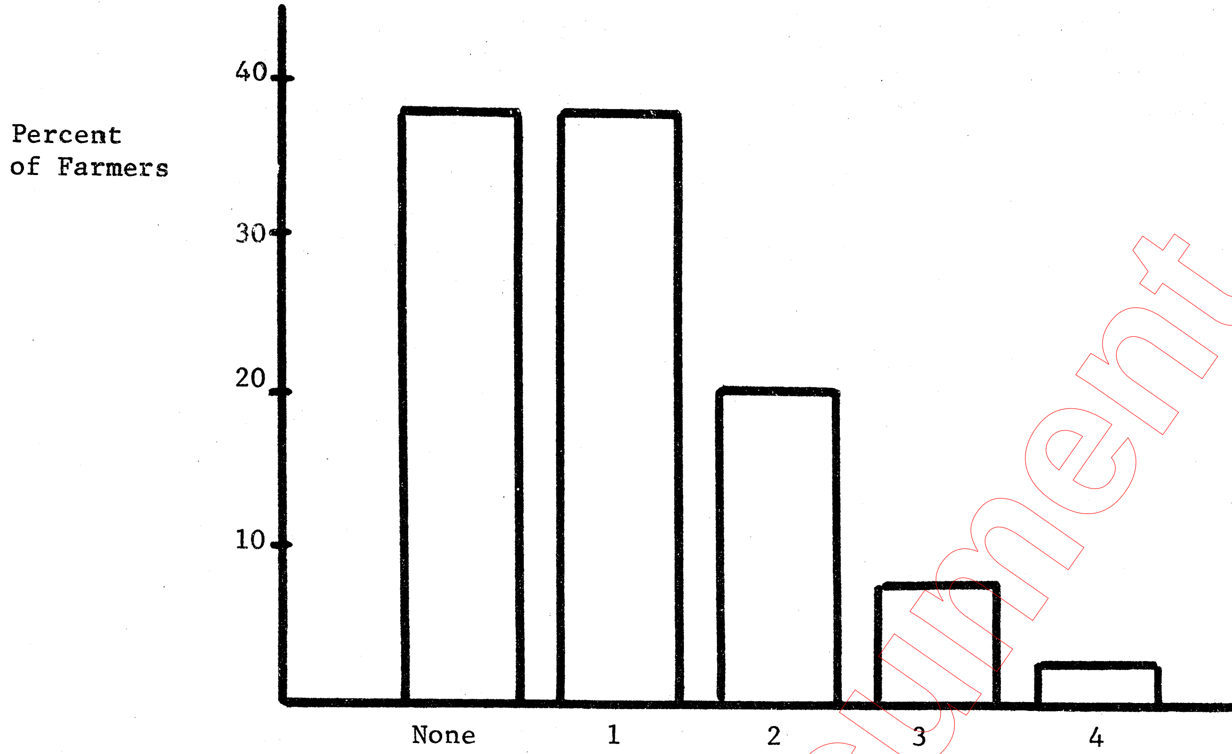


FIGURE 2.18
NUMBER OF DEALER SWITCHES, INDIANA, 1979

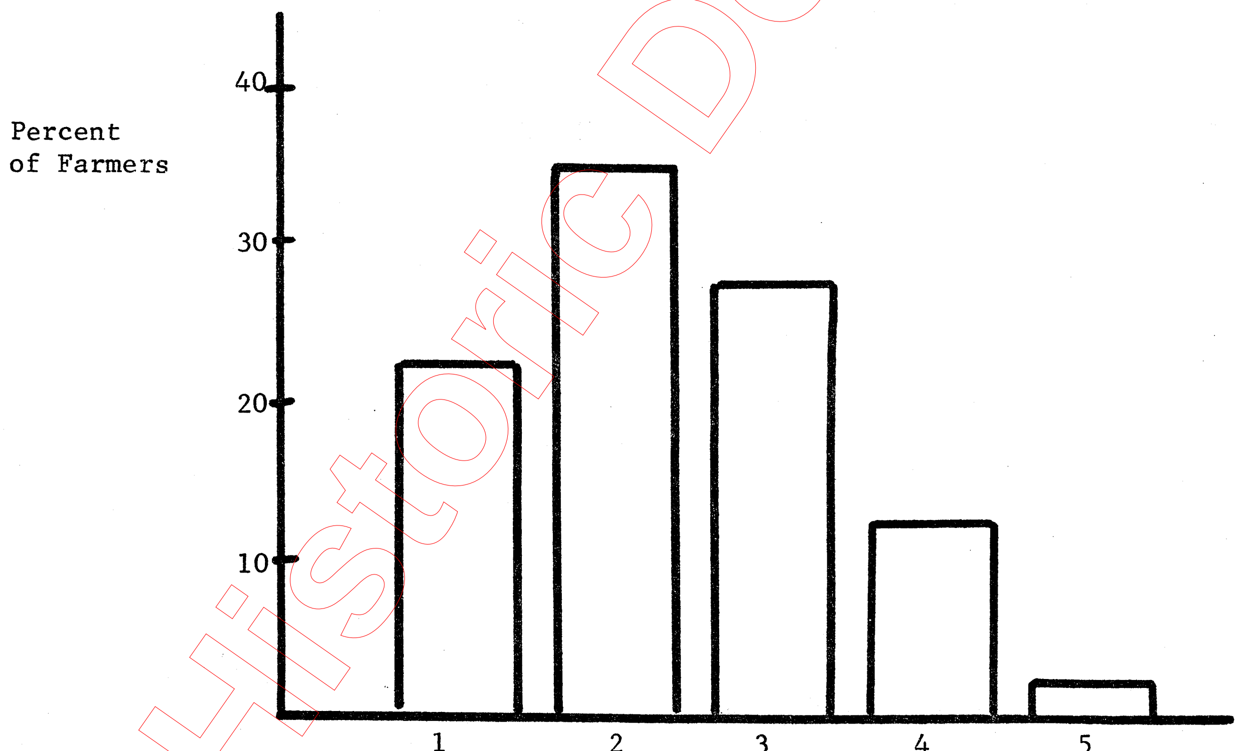


FIGURE 2.19
NUMBER OF DEALERS USED IN LAST FIVE YEARS, INDIANA, 1979

TABLE 2.18

FARMER DIFFERENCES IN PURCHASING BEHAVIOR, INDIANA, 1979

Characteristics / Variable	All Farmers	Size of Purchase (tons)	Total Acres (acres)	Gross Income ($000)	Farm Type	Age	County
Distance to Main Dealer	6.7 miles						
Purchase from Nearest Dealer	45%						
Number of Dealers Used in 1979	1.6			* under 50 over 200		* under 35 35-44	
Number of Dealers Used in Last 5 Years	2.3					* under 35 35-44	
Dealer Switches	0.8	* over 200				* under 35 35-44 45-54	

The last row of Table 2.18 shows the characteristics of those farmers who have a low degree of dealer loyalty. As expected, these results show that farmers with low loyalty purchase large quantities of fertilizer and are in the youngest age category.

2.7 Farmer Attitudes

The final stage in the analysis of farmer behavior and preferences was to look at a number of important attitudes related to fertilizer purchasing. This was done by presenting the farmers with a list of attitude statements, and for each statement, having them indicate the extent of their agreement on a six-point scale ranging from (1) strongly disagree to (6) strongly agree. For ease of interpretation, the statements have been grouped into the six categories listed in Table 2.19. These categories are: shopping, type of dealer, availability, service, information, and salesmen. In addition, Table 2.20 shows important farmer differences in response to the attitudes statements.

First, with regard to the attitide statements in the shopping category, the results indicate that substantially more than half the farmers feel there are important price and service differences among fertilizer dealers. Corresponding to this, about half of the sample farmers agree that much of their fertilizer purchasing is based on habit, and that dealing with only one fertilizer dealer reduces their bargaining power. It is interesting to observe in the first statement that only 20 percent of the farmers feel that fertilizer purchasing is more difficult than purchasing other production inputs. The farmer differences in Table 2.20 indicate that larger purchase farmers are the most likely to hold the opinion that dealing with only one dealer reduces their bargaining power. Small purchase

TABLE 2.19

RESPONSES TO ATTITUDE STATEMENTS, INDIANA, 1979

Attitude Statements	Strongly Disagree % of Farmers	Disagree % of Farmers	Agree % of Farmers	Strongly Agree % of Farmers
SHOPPING				
Purchasing fertilizer is more difficult than purchasing other products such as feed, seed, and chemicals.	34	44	17	3
There are important differences in the quality of services provided by different fertilizer dealers in my area.	7	24	50	20
A farmer can save a lot of money by looking around for the best deals in fertilizer.	7	32	50	11
I feel much of my fertilizer purchasing is based on habit.	15	28	42	15
If you only deal with one fertilizer dealer you loose your bargaining power.	20	33	36	11
TYPE OF DEALER				
I would rather purchase my fertilizer from a small dealer than from a large one.	12	50	33	5
I would rather purchase my fertilizer from an independent dealer than from a dealer who is owned by a major fertilizer supplier.	8	32	47	13
I would rather purchase my fertilizer from a dealer who carries a complete line of farm supplies than from a dealer who only sells fertilizer or crop inputs.	23	47	21	9
I would get much better service from a fertilizer dealer who sells only fertilizer than from a dealer who also sells other products	14	31	41	13
Coops provide better service than other fertilizer dealers.	33	38	25	4

TABLE 2.19
RESPONSES TO ATTITUDE STATEMENTS, INDIANA, 1979
(continued)

Attitude Statments	Strongly Disagree % of Farmers	Disagree % of Farmers	Agree % of Farmers	Strongly Agree % of Farmers
AVAILABILITY				
The fertilizer products I want are readily available at my dealer.	1	4	42	53
Being able to obtain my fertilizer exactly when I want it is more important than saving a few dollars a ton.	1	6	41	52
SERVICE				
I want good service from my fertilizer dealer and I'm willing to pay for it.	3	9	59	29
My dealer provides prompt and personal assistance with my fertilizer problems.	1	8	55	36
I would hesitate doing business with a dealer who didn't stay open at night or on Sundays and Holidays during the planting season.	15	23	31	30
INFORMATION				
The fertilizer dealer I am doing business with does a good job of supplying me with information.	3	8	55	35
The information supplied by most fertilizer companies is misleading.	16	58	25	2
A lot of advertising done by agricultural companies is misleading.	7	27	48	17
SALESMEN				
I'm always happy to discuss my fertilizer program with company or dealer salesmen.	15	21	44	33
Fertilizer salesmen are an unnecessary service which simply adds to the cost of fertilizer.	13	34	38	15

farmers, on the other hand, are the most likely to feel that their fertilizer purchasing is based on habit.

The second group of statements in Table 2.19 are concerned with dealer type. Here the results show that most farmers would rather purchase from a larger, independent, specialized dealer than some other type. There is, in addition, widespread disagreement with the statement that co-ops provide better service than other types of fertilizer dealers. The only differences which emerged among farm and farmer types in the responses to these statements is the greater tendency for both the very small and very large purchase farmers to feel that co-ops provide better service than other types of fertilizer dealers.

Two statements were used to assess farmer attitides toward fertilizer availability. Here the results showed that most fertilizer products are readily available at fertilizer dealers, and that availability in terms of obtaining the product exactly when it is needed is more important than small price savings. No farmer differences were found in the responses to these statements.

The responses to the three statements related to dealer services indicate that most farmers want good service from their dealer, that they feel they are getting fairly good service now, but that they would be hesitant to continue doing business with a dealer who would not provide good service, for example, staying open for long hours during busy seasons. This last attitude was particularly strong among larger purchase farmers. In a similar vein, most farmers feel that both fertilizer dealers and companies are doing a fairly good job of supplying information, even though some of the advertising that is done is perceived as being misleading.

TABLE 2.20

FARMER DIFFERENCES IN RESPONSE TO ATTITUDE STATEMENTS, INDIANA, 1979

CHARACTERISTICS / VARIABLES	ALL FARMERS[1]	SIZE OF PURCHASE (Tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
Purchasing fertilizer is more difficult than other products	2.4						** Decatur
There are important quality differences among dealers	4.2					* under 35	
A farmer can save money by shopping for best deals	3.8						
Much of my fertilizer purchasing is based on habit	3.7	** Under 50		** Under 50			
If you deal with one dealer you loose your bargaining power	3.3	* 100-200 Over 200	** Over 700	** 100-200 Over 200			
Rather purchase from a small dealer than a large one	3.1						
Rather purchase from independant dealer than one owned by fertilizer company	3.8						

TABLE 2.20

FARMER DIFFERENCES IN RESPONSE TO ATTITUDE STATEMENTS, INDIANA, 1979
(continued)

Characteristics / Variables	ALL FARMERS	SIZE OF PURCHASE (tons)	TOTAL ACRES (acres)	GROSS INCOME ($000)	FARM TYPE	AGE	COUNTY
Rather purchase from dealer who carries complete line of farm supplies	2.8						
Get Better Service From Dealer Who Sells Only Fertilizer	3.6					** Under 35 35-44 45-54	** Decatur
Coops Provide Better Service From Other Fertilizer Dealers	2.6	* Under 50 Over 200	* Over 200	* Under 50 Over 200			** Decatur
Fertilizer Products I Want Are Readily Available	5.4						*** Jasper
Being Able to Obtain Fertilizer Exactly When I Want It Is More Important Than Price	5.2						** Jasper
I Want Good Service and Am Willing to Pay For It	4.8						
My dealer provides prompt assistance with my problems	4.9					* 45-54	** Jasper

TABLE 2.20

FARMER DIFFERENCES IN RESPONSE TO ATTITUDE STATEMENTS, INDIANA, 1979
(continued)

Characteristics / Variables	All Farmers	Size of Purchase (tons)	Total Acres (acres)	Gross Income ($000)	Farm Type	Age	County
Hesitate Doing Business With Dealer Who Didn't Stay Open or Sundays and Holidays	4.0	*** over 200				** under 35 35-44	
My Fertilizer Dealer Does Good Job of Providing Information	4.9		* under 400 400-700		* cash crop livestock		
Information Supplied by Most Fertilizer Companies is Misleading	2.8		* 400-700 over 700				
A Lot of Advertising is Misleading	4.0						
Always Happy to Discuss Fertilizer Program with Salesman	4.6	** 50-100 100-200 over 200				** 35-44	
Fertilizer Salesmen are Unnecessary Service	3.6						

Calculated using a six-point scale ranging from (1) strongly disagree to, (6) strongly agree; higher numbers, therefore, represent greater agreement.

Finally, with regard to salesmen, well over 70 percent of the sample expressed the opinion that they were always happy to discuss their fertilizer program with dealer and company salesmen even though almost 50 percent feel salesmen are an unnecessary service which simply adds to the cost of fertilizer. It is interesting to note that the middle to large size of purchase farmers and the middle age farmers are more likely to want to discuss their fertilizer program with salesmen than are the small size of purchase farmers and younger or older farmers.

3.0 SUMMARY AND CONCLUSIONS

The purpose of this report has been to investigate the behavior and preferences of Indiana farmers in purchasing and using fertilizer products and services. The major findings of this survey suggest important implications for the development of fertilizer marketing programs. The study of shopping activities, information sources, the role of price, product line, services, distance from the dealer and the attitude of the farmer toward the dealer all revealed significant information that can be useful in developing a market plan for the local fertilizer retailer.

Among the most significant findings of this study is the existance of distinctive and qualifiable groups of customers with, measurably different attitudes, preferences, and behavior. These differences became particularly obvious when farmers of various age, type and size of farm groupings were considered in each market area. By recognizing the existance of market segments with distinctive needs, the local dealer can identify target segments and develop a strategic marketing plan to reach those customers effectively.

Other major findings and implications for the development of effective marketing programs are summarized below.

3.1 <u>Shopping Activities</u>

<u>Influence Groups:</u>

Farmers rely more heavily on their fertilizer dealer as a primary source of information and advice about their fertilizer program than any other single source. Only family members and other farmers were also reported as frequently used sources. University or county extension agents, independent agronomists and custom applicators, or fertilizer manufacturers were consulted only infrequently. Since the dealer has become such an important information source about fertilizer questions there is a great opportunity to influence the agronomist decisions of many farmers.

Family members and other farmers are also of major importance as information sources for decisions among all farmers surveyed. Word-of-mouth and community image must be considered important to a dealers marketing plan. Perceptions of product quality, service, image, etc. are likely to be influenced through community and family interaction. Dealers must consciously work to create an image consistant with their market objectives.

While these trends held among all farmers surveyed, there was a significant tendency for farmers in one market area to rely more heavily on other farmers and family members than in the other market area studied. This indicates that social or family customs may play different roles in different markets. Marketing programs should be adapted to the pecularities of the local market area.

Larger farmers had a strong tendency to rely more heavily on university scientists and independent agronomists as information sources. Younger farmers especially, relied more on independent agronomists than other farmers. Dealers who are aware of these tendencies and who have targeted larger or younger farmers, may want to utilize university scientists and independent agronomists more extensively in farmer meetings or educational programs. This association would likely have appeal to these market segments.

Meetings and Publications:

Dealer or company sponsored activities proved to be more popular than university or government sponsored event -- with the single exception of university publications which were widely read by all, but especially the younger farmers. Dealers may want to reinforce their efforts by utilizing and distributing university literature as an effective way of building their image.

Results also showed medium and larger farmers are more prone to attend dealer mettings and demonstrations while the very large farmers look toward university or government research plots. Dealers, might consider inviting very large target accounts to accompany them to university field days. On the other hand, exhibits at fairs and farm shows should be aimed to appeal to smaller older farmers who are more likely to attend those events.

Dealer Contacts:

Fertilizer dealers often speak of the frequency of contacts made by farmers shopping for fertilizer. Yet, results showed well over one third of the farmers contacted only one dealer and hardly any farmers reported more than three dealer contacts before choosing a dealers. The number of dealers contacted varied considerably by type of farmer. Larger, younger farmers make significantly more contacts than other farmers. The aggressive shopping behavior of larger and younger farmers may set the tone for the entire market as they are likely to become the focal point of attention for dealers unless dealers are alert to the influence of this segment and choose to respond to other segments.

Even more striking is the lack of sales calls made by dealers on farmers. Almost three fourths of the farmers reported they were contacted by no more than two dealers and forty percent were not contacted by any dealer. There is clearly a great deal of room for more aggressive dealer activity in calling on farmers. Although, most farmers have some contact with dealers during the course of the year, the pattern of contact is very uneven from one group of farmers to another. Specifically, medium to large purchase farmers, and farmers in the young and middle age categories, are the most likely to initiate dealer contacts. Conversely, there is a definite tendency for dealers to concentrate calls on medium and large purchase farmers and farmers in the middle age groups. Because of the present and future importance of this segment (large purchase, middle age farmers), this strategy of maximizing contact with this group cannot be questioned. It is important to point out, however, that if this is done at the exlusion of other groups, some important opportunities can be overlooked. A good example is the younger farmers. Because these farmers value dealer information, and because they are contacted less frequently than the middle age farmers, companies or dealers who concentrate more time and attention on this group could enjoy a considerable amount of success.

3.2 Information Sources

Although farmers have a wide variety of sources from which they can obtain fertilizer information, the usefulness of these sources depends on they type of information required. Survey results showed that the following sources (listed in order of importance for each information type) were those considered most important for the four types of information considered in the research:

a) Fertilizer Application -- Soil tests, fertilizer dealer, other farmers, government/university publications and farm magazine articles

b) Proper Fertilizer -- Soil tests, fertilizer dealer, other farmers, government/university publications, and extension agents.

c) Technical Problems -- Fertilizer dealer, fertilizer company representatives, extension agents, government/university research stations.

d) Selecting Dealers -- Other farmers, fertilizer dealers, farmer meetings, and extension agents.

Several observations can be made about the above results. First, it is obvious that the fertilizer dealer is the only source rated important for all types of information. This further underscores the importance of the dealer in transmitting information to farmers, and the consequent need for dealers to continually update their technical and marketing skills. Second, these results show the importance of objective information sources such as soil tests, and government/university publications in providing specific information on fertilizer application and use. Third, with the exception of other farmers and extension agents, the sources cited as important in dealer selection decisions are controllable by fertilizer marketers. This implies that the proper use of such sources as company representatives and farmers meetings can be important in attracting new customers to a dealership.

3.3 Shopping Patterns and Prices:

Different types of farmers use distinctively different approaches in making fertilizer purchasing decisions. Four such approaches were identified as being of prime importance. These approaches, and the percentage and type of farmers most likely to follow each are:

DESCRIPTION	FARMER TYPE	PERCENT
Shopping/No Loyalty		
Contact a number of fertilizer dealers, get price quotes, purchase from dealer with lowest price	All Types	13

DESCRIPTION	FARMER TYPE	PERCENT
Shopping/Some Loyalty		
Obtain prices from a few dealers before trying to make a deal with a preferred dealer.	Large Purchase	25
No Shopping/Loyal		
Make a list of fertilizer requirements and then contact a fertilizer dealer to place an order.	Medium Purchase	46
No Shopping/Loyal		
Wait until contacted by a fertilizer dealer and then places an order.	Small Purchase	8

Nearly half of all farmers reported little price shopping and a high degree of dealer loyalty. They said that they generally decide what fertilizer they desire and then contact a dealer and order the product. Another one fourth shopped prices at a "few" dealers but then placed their order with a "preferred dealer".

It is particularly important for the fertilizer dealer to recognize distinct differences in behavior among different size farmers. Large farmers tend to check prices more but in the final analysis, also order from a preferred dealer. Medium sized farmers have a tendency to decide what they want and then place an order while smaller farmers tend to wait for a dealer to contact them.

Further, investigation of the role of price indicates a strong majority of farmers disagree that price is the most important consideration in choosing a dealer and do not necessarily buy at the lowest price alternative.

Farmers seem to feel that while there are differences in prices in their market area that a good long term relationship is more important than price savings of up to five percent.

An important minority - about one third of the farmers - feel that prices is the major factor, indicate they usually buy at the lowest price, and would switch dealers quickly for a five percent price differential. Not suprisingly, these price shoppers were younger, larger farmers.

Dealers who choose to target specific segments of their market should consider the implications of the shopping behavior of younger larger farmers, who consistantly use price as the deciding factor and switch dealers easily. Obtaining and holding their business will certainly require a lower price than other market segments. Attempting to get their business with a "good deal" one year will do little to insure their loyalty the following year.

These findings have other important implications for fertilizer marketers. First, they can be of use in selecting target markets. Organizations that choose to concentrate their marketing efforts on the larger purchase segment must realize that although these farmers account for a large proportion of fertilizer sales, they are also very likely to bargain with dealers and make decisions on the basis of price. As a result, they exhibit a somwhat lower level of dealer loyalty than other groups. Medium and small purchase farmers, on the other hand, might bargain to some extent with suppliers, but in general they have strong dealer preferences and are not as inclined to make dealer changes. Second, the results show that there is a certain, small percentage of farmers who do not purchase fertilizer, but are sold. These are the individuals who wait until they are contacted by fertilizer dealers before placing an order. In looking at some of the other groups, in particular the 46 percent in the no shopping/loyal group, one wonders whether contacts by dealers with these farmers could not also result in sales. In other words, there appears to be substantial opportunity to increase sales in the small and medium purchase segments by perhaps just making a few phone calls or farm visits.

Finally, the fact that there is a sizeable proportion of farmers who have established dealer preferences based primarily on factors other than price underscores the importance of marketing programs which stress these other factors (other products, services, dealer image).

Price and Seasonality

Three other price attitudes held by most farmers have some important implications in the development of an overall pricing strategy. These are: first, most farmers feel that price is a more important consideration in the Winter than in the Spring; second, many farmers feel that certain types of fertilizer are much better values than other types; and third, substantially more than half of the farmers prefer to have materials and services priced separately as opposed to a combined price.

For the most part, the implications of these findings are obvious. In the case of the second attitude, however, a few comments may be in order. The essence is that many farmers perceive certain types of fertilizer to be underprices or overpriced relative to others. This implies that some adjustments in relative prices among types may be desirable from the point of view of increasing revenue and profits. Unfortunately, no attempt was made in this study to determine which types were perceived as being over or under priced or the likely magnitude of these differences. Because of the importance of product line pricing in the over-all pricing strategy of an organization, this question should be explored more fully in future research.

Fairness of Price

A final pricing attitude shared by a majority of farmers is that the price of fertilizer is unreasonably high. Indeed, tabulation of responses to this statement indicate that slightly over 50 percent of the sample farmers agree to some extent with this statement. A comparison with the results of other studies where the same question was asked, puts this into better perspective. For example, in recent studies of seed and herbicide purchasing, 59 percent and 83 percent of the farmers respectively responded in a similar fashion. To some extent it is undoubtedly true that farmers always feel they are paying too much for items they must buy. Industry action on this point, however, may be desirable to explain why prices are high, and the fact that despite high prices, fertilizer is still a good value for most farm operations.

3.4 Product Line

In addition to fertilizers, farmers, on the average, purchase more than three other products from their fertilizer supplier. Of these, the most common are: herbicides, insecticides, farm seeds other than corn, limestone and micronutrients. Other, less frequently purchased items, include: seed corn, general farm supplies, feeds, and animal health products. An analysis of the type of farmer purchasing each product from a fertilizer dealer revealed that the medium to large purchase farmers have a greater tendency to purchase insecticides, micronutrients, and limestone from their fertilizer dealer, while both the very large and very small purchase farmers have the greatest tendency to purchase feeds and animal health products. These results underscore the importance of tailoring a dealer's product line with his target market. If, for example, a dealer is making a concentrated effort to attract the very large purchase farmers to his organization, the inclusion of limestone in the product line would be one important element in an overall marketing plan.

In addition to looking at the aggregate purchase of non-fertilizer items at fertilizer dealers, the analysis also explored the balance of supply and demand for these products. The results of this further analysis revealed that some excess supply exists in all product areas, but particularly in seed corn, other farm seeds, feeds, animal health products, and micro-nutrients. This, of course, does not imply that dealers should immediately drop these items. It does, however, suggest the need for careful analysis on a location by location basis to determine if the loacl demand for each product, together with the products costs and margins, justify its continued existence in the product line. Or alternatively, this type of analysis may show that farmers are not purchasing the item from a fertilizer dealer because they are not aware that it is being carried by the dealer, or they perceive that it is too high priced or not supported with sufficenent technical expertise, or for some similar reason. If this is the case, the dealer once again must analyze whether the increased cost of promoting and supporting the product can be justified.

3.5 Dealer Services

Services also offer potential for attracting or holding customers and have long been used as a marketing tool by fertilizer dealers. While most farmers recognize that a wide variety of services exist. Some services were more important than others in influencing dealer selection. Traditional services such as custom blending, application equipment, soil testing, and agronomic information were quite important to nearly all farmers studied. Yet many farmers did not even want their dealer to be involved in services such as grain marketing or total crop management.

In terms of dealers marketing strategy, it is important to recognize that some services are so widely available that they are not particularly useful in differentiating one dealer from another. Yet, most farmers feel these services are "absolutely necessary", and so the dealer has practically no option but to offer such services such as custom blending, ample application equipment, agronomic advise, soil testing, etc.

But there can be significant differences in the minds of customers as to how well these services are performed. While the quality of service is difficult to measure and was not considered in this study, it is reasonable to assume that customers perception of differences is all that is necessary to influence the dealer selection. (See 3.7)

Other, less widely available services such as tissue analysis, demonstrations, limestone application, etc., may in fact help differentiate dealers. But the appeal of these services and others in attracting customers is less clear and varies among different types of farmers. For example, younger farmers were more inclined to be interested in technical advice from a staff agronomist, loading facilities, and demonstrations. On the other hand, older farmers felt the condition of application equipment, custom application, farmer meetings, and information on new developments were of higher importance. Larger farmers tend to be more concerned with custom blending, application, plant tissue analysis, and demonstrations. Cash grain farmers seem to be more interested in farmer meetings while livestock farmers are more concerned with complete crop management services.

These tendencies are logical in terms of the circumstances of each segment. Dealers who target specific segments should recognize each segment may favor different services, identify services important to target segments, establish or enhance priority services and promote those services to target customers.

3.6 Dealer Selection

There appears to be no relationship between any farm characteristic and the type of business organization of the dealer. While cooperatives held the largest market share in both market areas studied, neither independents, retail outlets of major suppliers, nor cooperatives seemed to have any inherent advantage because of their type of business organization.

Three major reasons for choosing a dealer were location, price, and availability of product. But as indicated in earlier sections, the relative importance of these factors varies greatly among different type of farmers. Larger farmers are more concerned with price, Smaller farmers are more concerned with location; and very small farmers more frequently mentioned availablility of the products. Beyond these three factions, the farmers identified a large number of reasons for selecting specific dealers such as: equipment consideratins, availability of specific products and/or services, buying or selling other products at the same outlet, delivery, good working relationship with dealer, personal friendships, dealer loyalty, etc. Although none of these factors were mentioned by a large proportion of farmers, they can assume a high degree of importance in mature market situations where farmers do not perceive much difference among dealers in the three main areas of location, price, and availability. When this is the case, farmers look to other areas where differences can, and often do, exist. As a result, dealers must constantly strive to determine what these other areas are, and then take the necessary steps to insure that their performance in these areas is perceived as being better than competition.

Farmers have a strong propensity for nearness in choosing a dealer. Within a ten mile radius the average farmer reported there were over five dealers and eighty percent of the farmers studied selected a dealer closer than ten miles away. In fact, almost half bought from their closest dealer. These trends held among all farmers regardless of type.

Dealers who hope to expand their market share must recognize the inherent difficulty in drawing customers from far away. Larger customers are more likely to be enticed by price while smaller customers in outling areas may be impressed by product availability. There seems to be a comparative advantage in attracting middle and small size farmers who are located nearby. Each of these suggest a strategy for making sales calls.

Loyality

Farmers tend to be loyal to their dealer. Results of this study indicate that over half of the farmers used only one or two dealers in a five year period. Further, forty percent did not switch dealers at any time in the last five years, while another forty percent made only one switch in five years. As expected, those who do switch frequently tend to be younger, larger farmers.

This again underscores the difficulty of a marketing strategy designed to hold the larger or younger farmer. Previous results indicate price will necessarily be an important factor and that this type customer cannot be expected to exhibit much loyalty in future seasons.

An analysis of the reasons for using more than one dealer revealed two underlying motivations: first, some farmers do this to bargain for better prices; and second, others do it because they cannot obtain the specific products, services, or equipment they need from one dealer. This latter point once again underscores the importance of matching a dealers product and service offering with the specific demands of his target market. Failure to do this most definitely results in loss of business to competitors who are doing a better job.

3.7 Farmer Attitudes

Farmers are under the impression that significant differences in price and the quality of service do exist in the market place. Yet many farmers, especially the smaller farmers, admitted their behavior tends to be habitual. Most farmers agree that while most products are readily available, availability is more important than a "small" price savings. They also said that they are willing to discuss their fertilizer needs with the dealer or salesman.

All this suggests a strategy for obtaining new accounts. Aggressive dealers should be aware of temporary inventory problems of their competition and use such opportune times to point out their advantages through timely sales calls.